

6. TABLE B-4 contains a list of pesticide compounds included in the Texas Surface Water Quality Standards at 30 TAC 307.6. TABLE B-4 must be completed if the facility manufactures or formulates pesticides or herbicides. Complete TABLE B-4 with the results of an analyses for each outfall that contains process wastewater or may contain pesticides or herbicides. Report an average and maximum value if more than one analytical result is available.

X N/A: This facility does not manufacture or formulate pesticides or herbicides.

TABLE B-4

N/A

OUTFALL <u>002</u> POLLUTANT	CONCENTRATION (µg/l) *		NUMBER OF SAMPLES	MAL (µg/l)
	AVG.	MAX.		
Aldrin	_____	_____	_____	0.05
Alpha-hexachlorocyclohexane	_____	_____	_____	0.05
Beta-hexachlorocyclohexane	_____	_____	_____	0.05
Carbaryl	_____	_____	_____	5
Chlordane	_____	_____	_____	0.15
Chlorpyrifos	_____	_____	_____	0.05
2,4-D	_____	_____	_____	10
Danitol	_____	_____	_____	----
4,4'-DDD	_____	_____	_____	0.1
4,4'-DDE	_____	_____	_____	0.1
4,4'-DDT	_____	_____	_____	0.1
Demeton	_____	_____	_____	0.2
Diazinon	_____	_____	_____	0.5
Dicofol	_____	_____	_____	20
Dieldrin	_____	_____	_____	0.1
Diuron	_____	_____	_____	----
Endosulfan I (alpha)	_____	_____	_____	0.1
Endosulfan II (beta)	_____	_____	_____	0.1
Endosulfan Sulfate	_____	_____	_____	0.1
Endrin	_____	_____	_____	0.1
Gamma - Hexachlorocyclohexane (Lindane)	_____	_____	_____	0.05
Guthion	_____	_____	_____	0.10
Heptachlor	_____	_____	_____	0.05
Heptachlor Epoxide	_____	_____	_____	1.0
Hexachlorophene	_____	_____	_____	10
Malathion	_____	_____	_____	0.10
Methoxychlor	_____	_____	_____	2.0
Mirex	_____	_____	_____	0.2
Parathion	_____	_____	_____	0.1
Toxaphene	_____	_____	_____	5
2,4,5-TP (Silvex)	_____	_____	_____	2

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7. Review the following TABLE B-5 and mark the appropriate column with an "X" if you believe a specific constituent to be present or absent in your discharge. Base your determination on your knowledge of raw materials, maintenance chemicals, intermediates, and products handled at your facility and/or previous analyses of your wastewater. You must provide the results of at least one analysis for each constituent believed present. Report an average and maximum value if more than one analytical result is available.

TABLE B-5

OUTFALL 002

POLLUTANT	BELIEVED PRESENT	BELIEVED ABSENT	CONCENTRATION (mg/l) *		NUMBER OF SAMPLES
			AVG.	MAX	
Bromide	—	X	—	<6	1
Color(PCU)	X	—	—	15 Pt. Co	1
Nitrate-Nitrite(as N)	X	—	—	42.7	1
Sulfide(as S)	—	X	—	<1	1
Sulfite(as SO <sub>3</sub> )	—	X	—	<2	1
Surfactants	—	X	—	<0.1	1
Total Antimony	—	X	—	<30	1
Total Beryllium	—	X	—	<5	1
Total Boron	X	—	—	220 ug/l	1
Total Cobalt	—	X	—	<20 ug/l	1
Total Iron	—	X	—	<20 ug/l	1
Total Magnesium	X	—	—	3,475 ug/l	1
Total Molybdenum	—	X	—	<30 ug/l	1
Total Manganese	—	X	—	<10 ug/l	1
Total Thallium	—	X	—	<10 ug/l	1
Total Tin	—	X	—	<100 ug/l	1
Total Titanium	—	X	—	<50 ug/l	1

\* Indicate units if different from mg/l.

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8. Table B-6 is a list of primary industrial categories with a breakdown of Gas Chromatography/Mass Spectrometry (GC/MS) testing requirements for Priority Pollutants. Categories are defined in 40 CFR Parts 400 - 471. Check any category(s) that apply to your facility and provide the indicated analysis for Priority Pollutants listed in Table B-6.

TABLE B-6

N/A	GC/MS Testing Required			
	Volatile	Acid	Base/Neutral	Pesticides
Adhesives and Sealants	Yes	Yes	Yes	No
Aluminum Forming	Yes	Yes	Yes	No
Auto and Other Laundries	Yes	Yes	Yes	Yes
Battery Manufacturing	Yes	No	Yes	No
Coal Mining	No	No	No	No
Coil Coating	Yes	Yes	Yes	No
Copper Forming	Yes	Yes	Yes	No
Electric and Electronic Components	Yes	Yes	Yes	Yes
Electroplating	Yes	Yes	Yes	No
Explosives Manufacturing	No	Yes	Yes	No
Foundries	Yes	Yes	Yes	No
Gum and Wood Chemicals				
Subparts A,B,C,E	Yes	Yes	No	No
Subparts D,F	Yes	Yes	Yes	No
Inorganic Chemicals	Yes	Yes	Yes	No
Iron and Steel Mfg.	Yes	Yes	Yes	No
Leather Tanning/Finishing	Yes	Yes	Yes	No
Mechanical Products Mfg.	Yes	Yes	Yes	No
Nonferrous Metals Mfg.	Yes	Yes	Yes	Yes
Ore Mining(Subpart B)	No	Yes	No	No
Organic Chemicals,	Yes	Yes	Yes	Yes
Plastics and Synthetic Fibers				
Paint and Ink Formulation	Yes	Yes	Yes	No
Pesticides	Yes	Yes	Yes	Yes
Petroleum Refining	Yes	Yes	Yes	No
Pharmaceutical Preparations	Yes	Yes	Yes	No
Photographic Equipment and Supplies	Yes	Yes	Yes	No
Plastic Processing	Yes	No	No	No
Porcelain Enameling	No	No	No	No
Printing and Publishing	Yes	Yes	Yes	Yes
Pulp and Paperboard Mills				
Subparts A,B,C,D,R	*	Yes	*	Yes
Subparts F,G,H,I, K,L,M,N,O,P,	Yes	Yes	*	Yes
Subparts E,Q,S,T	Yes	Yes	*	Yes
Subparts J,U	Yes	Yes	Yes	*
Rubber Processing	Yes	Yes	Yes	No
Soap and Detergent Mfg.	Yes	Yes	Yes	No
X Steam Electric Power Plants	Yes	Yes	No	No
Textile Mills (Not Subpart C)	Yes	Yes	Yes	No
Timber Products Processing	Yes	Yes	Yes	Yes

\* Test if "believed present"

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9. Table B-7 contains a list of priority pollutants. If you are a primary industry as shown in Table B-6 and process wastewater is discharged, you must analyze for those GC/MS fractions as shown in Table B-7. If you are not a primary industry and if you believe that a specific constituent (except for: acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4,6 dinitrophenol) is present in an amount greater than 10 ppb you must provide the results of at least one analysis. If you believe that acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4,6 dinitrophenol is present in an amount greater than 100 ppb you must provide results for these chemicals. Base your determination on your knowledge of raw materials, maintenance chemicals, intermediates, and products handled at your facility or analysis of your wastewater. Report an average and a maximum value if more than one analytical result is available.

TABLE B-7

OUTFALL 002\*

POLLUTANT	CONCENTRATION (µg/l) *		NUMBER OF SAMPLES	MAL (µg/l)
	AVG.	MAX.		
VOLATILE COMPOUNDS				
Acrolein	_____	_____	_____	50
Acrylonitrile	_____	_____	_____	50
Benzene	_____	_____	_____	10
Bromoform	_____	_____	_____	10
Carbon Tetrachloride	_____	_____	_____	10
Chlorobenzene	_____	_____	_____	10
Chlorodibromomethane	_____	_____	_____	10
Chloroethane	_____	_____	_____	10
2-Chloroethylvinyl Ether	_____	_____	_____	50
Chloroform	_____	_____	_____	10
Dichlorobromomethane	_____	_____	_____	10
1,1-Dichloroethane	_____	_____	_____	10
1,2-Dichloroethane	_____	_____	_____	10
1,1-Dichloroethylene	_____	_____	_____	10
1,2-Dichloropropane	_____	_____	_____	10
1,3-Dichloropropylene	_____	_____	_____	10
Ethylbenzene	_____	_____	_____	10
Methyl Bromide	_____	_____	_____	20
Methyl Chloride	_____	_____	_____	20
Methylene Chloride	_____	_____	_____	20
1,1,2,2-Tetrachloroethane	_____	_____	_____	10
Tetrachloroethylene	_____	_____	_____	10
Toluene	_____	_____	_____	10
1,2-Trans-Dichloroethylene	_____	_____	_____	10
1,1,1-Trichloroethane	_____	_____	_____	10
1,1,2-Trichloroethane	_____	_____	_____	10
Trichloroethylene	_____	_____	_____	10
Vinyl Chloride	_____	_____	_____	10

\* Indicate units if different from µg/l

\*Outfall 002 discharges only domestic wastewater, and is not subject to this testing.

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TABLE B-7 (con't)

OUTFALL 002\*

POLLUTANT	CONCENTRATION (µg/l) *		NUMBER OF SAMPLES	MAL (µg/l)
	AVG.	MAX.		
ACID COMPOUNDS				
2-Chlorophenol	_____	_____	_____	10
2,4-Dichlorophenol	_____	_____	_____	10
2,4-Dimethylphenol	_____	_____	_____	10
4,6-Dinitro-o-Cresol	_____	_____	_____	50
2,4-Dinitrophenol	_____	_____	_____	50
2-Nitrophenol	_____	_____	_____	20
4-Nitrophenol	_____	_____	_____	50
P-Chloro-m-Cresol	_____	_____	_____	10
Pentachlorophenol	_____	_____	_____	50
Phenol	_____	_____	_____	10
2,4,6-Trichlorophenol	_____	_____	_____	10
BASE/NEUTRAL COMPOUNDS				
Acenaphthene	_____	_____	_____	10
Acenaphthylene	_____	_____	_____	10
Anthracene	_____	_____	_____	10
Benzidine	_____	_____	_____	50
Benzo(a) Anthracene	_____	_____	_____	10
Benzo(a) Pyrene	_____	_____	_____	10
3,4-Benzofluoranthene	_____	_____	_____	10
Benzo(ghi) Perylene	_____	_____	_____	20
Benzo(k) Fluoranthene	_____	_____	_____	10
Bis(2-Chloroethoxy) Methane	_____	_____	_____	10
Bis(2-Chloroethyl) Ether	_____	_____	_____	10
Bis(2-Chloroisopropyl) Ether	_____	_____	_____	10
Bis(2-Ethylhexyl) Phthalate	_____	_____	_____	10
4-Bromophenyl Phenyl Ether	_____	_____	_____	10
Butylbenzyl Phthalate	_____	_____	_____	10
2-Chloronaphthalene	_____	_____	_____	10
4-Chlorophenyl Phenyl Ether	_____	_____	_____	10
Chrysene	_____	_____	_____	10
Dibenzo(a, h) Anthracene	_____	_____	_____	20
1,2-Dichlorobenzene	_____	_____	_____	10
1,3-Dichlorobenzene	_____	_____	_____	10
1,4-Dichlorobenzene	_____	_____	_____	10
3,3-Dichlorobenzidine	_____	_____	_____	50
Diethyl Phthalate	_____	_____	_____	10
Dimethyl Phthalate	_____	_____	_____	10
Di-n-Butyl Phthalate	_____	_____	_____	10
2,4-Dinitrotoluene	_____	_____	_____	10
2,6-Dinitrotoluene	_____	_____	_____	10
Di-n-Octyl Phthalate	_____	_____	_____	10
1,2-Diphenyl Hydrazine (as Azobenzene)	_____	_____	_____	20

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\* Indicate units if different from µg/l

\*Outfall 002 discharges only domestic wastewater and is not subject to this testing.

TABLE B-7 (con't)

OUTFALL 002\*

POLLUTANT	CONCENTRATION (µg/l) *		NUMBER OF SAMPLES	MAL (µg/l)
	AVG.	MAX.		
BASE/NEUTRAL COMPOUNDS (con't)				
Fluoranthene	_____	_____	_____	10
Fluorene	_____	_____	_____	10
Hexachlorobenzene	_____	_____	_____	10
Hexachlorobutadiene	_____	_____	_____	10
Hexachlorocyclopentadiene	_____	_____	_____	10
Hexachloroethane	_____	_____	_____	20
Indeno (1,2,3-cd) pyrene	_____	_____	_____	20
Isophorone	_____	_____	_____	10
Naphthalene	_____	_____	_____	10
Nitrobenzene	_____	_____	_____	10
N-Nitrosodimethylamine	_____	_____	_____	20
N-Nitrosodi-n-Propylamine	_____	_____	_____	20
N-Nitrosodiphenylamine	_____	_____	_____	20
Phenanthrene	_____	_____	_____	10
Pyrene	_____	_____	_____	10
1,2,4-Trichlorobenzene	_____	_____	_____	10
PESTICIDES N/A				
Aldrin	_____	_____	_____	0.05
alpha-BHC	_____	_____	_____	0.05
beta-BHC	_____	_____	_____	0.05
gamma-BHC	_____	_____	_____	0.05
delta-BHC	_____	_____	_____	0.05
Chlordane	_____	_____	_____	0.15
4,4-DDT	_____	_____	_____	0.1
4,4-DDE	_____	_____	_____	0.1
4,4-DDD	_____	_____	_____	0.1
Dieldrin	_____	_____	_____	0.1
alpha-Endosulfan	_____	_____	_____	0.1
beta-Endosulfan	_____	_____	_____	0.1
Endosulfan Sulfate	_____	_____	_____	0.1
Endrin	_____	_____	_____	0.1
Endrin Aldehyde	_____	_____	_____	0.1
Heptachlor	_____	_____	_____	0.05
Heptachlor Epoxide	_____	_____	_____	1.0
PCB-1242	_____	_____	_____	1.0
PCB-1254	_____	_____	_____	1.0
PCB-1221	_____	_____	_____	1.0
PCB-1232	_____	_____	_____	1.0
PCB-1248	_____	_____	_____	1.0
PCB-1260	_____	_____	_____	1.0
PCB-1016	_____	_____	_____	1.0
Toxaphene	_____	_____	_____	5.0

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\* Indicate units if different from µg/l

\*Outfall 002 only discharges domestic wastewater and is not subject to this testing.

3. Outfalls that contain any wastewater other than storm water (e.g., process wastewater, utility wastewater, domestic wastewater, groundwater, etc.) must complete TABLE B-1. Facilities that utilize land application or evaporation for wastewater treatment/disposal must also provide these analytical results.

TABLE B-1

OUTFALL 003 Sample Type: GRAB COMPOSITE X

POLLUTANT	INFLUENT CONCENTRATION (mg/l)		NUMBER OF SAMPLES	EFFLUENT CONCENTRATION (mg/l)		NUMBER OF SAMPLES
	AVG.	MAX.		AVG.	MAX.	
BOD (5-day)					3	1
CBOD (5-day)					2	1
Chemical Oxygen Demand					19	1
Total Organic Carbon					7	1
Ammonia Nitrogen					< 0.1	1
Total Suspended Solids					4	1
Nitrate Nitrogen					0.1	1
Total Organic Nitrogen					0.6	1
Total Phosphorus					0.02	1
Oil and Grease				< 5	< 5	4
Total Residual Chlorine				< 0.10	0.12	24
Total Dissolved Solids					303	1
Sulfate					110	1
Chloride					26	1
Fluoride				562	2100*	4
Fecal Coliform				< 5	< 5	4
Temperature (°F)				97°F	120°F	730
pH (Standard Units; min/max)					NA	**

POLLUTANT	EFFLUENT CONCENTRATION (µg/l)		NUMBER OF SAMPLES	MAL µg/l
	AVG.	MAX.		
Total Aluminum		175	1	30
Total Antimony		< 30	1	30
Total Arsenic		< 10	1	10
Total Barium		366	1	10
Total Beryllium		< 5	1	5
Total Cadmium		< 1	1	1
Total Chromium		< 10	1	10
Trivalent Chromium		< 10	1	--
Hexavalent Chromium		< 10	1	10
Total Copper		< 10	1	10
Cyanide, (Total, Amenable to Chlorination or Weak-Acid Dissociable)		< 20	4	20
Total Lead		< 5	1	5
Total Mercury		< 0.2	1	0.2
Total Nickel		< 10	1	10
Total Phenols		< 20	1	20
Total Selenium		< 10	1	10
Total Silver		< 2	1	2
Total Thallium		< 10	1	10
Total Zinc		< 5	1	5

\*Fecal concentrations highly variable. Intake Maximum concentration was 700 CFU/100 ml, and average intake concentration was 253 CFU/100 ml.

\*\*This Outfall has no pH limitations.

4. TABLE B-2 contains a list of organic compounds included in the Texas Surface Water Quality Standards at 30 TAC 307.6. TABLE B-2 must be completed with the results of an analysis of all pollutants for each outfall that contains process wastewater. In addition, an analysis for each continuously discharging nonprocess outfall (including noncontact cooling water) must be provided for only those pollutants in TABLE B-2 that are used at the facility as a feedstock, intermediate, product, byproduct, coproduct, maintenance chemical or that could in any way contribute to contamination in the wastewater streams.

TABLE B-2

OUTFALL 003

POLLUTANT	CONC. µg/l (*1)		NUMBER OF SAMPLES	MAL (µg/l)
	AVG.	MAX.		
Benzene		<10	1	10
Benzidine		<50	1	50
Benzo(a)anthracene		<10	1	10
Benzo(a)pyrene		<10	1	10
Bis(chloromethyl)ether (*2)		<10	1	--
Carbon Tetrachloride		<10	1	10
Chlorobenzene		<10	1	10
Chloroform		<10	1	10
Chrysene		<10	1	10
Cresols		ND	1	(*3)
Dibromochloromethane		<10	1	10
1,2-Dibromoethane		<2	1	2
1,4-Dichlorobenzene		<10	1	10
1,2-Dichloroethane		<10	1	10
1,1-Dichloroethylene		<10	1	10
Fluoride		390	1	500
Hexachlorobenzene		<10	1	10
Hexachlorobutadiene		<10	1	10
Hexachloroethane		<20	1	20
Methyl Ethyl Ketone		<50	1	50
Nitrobenzene		<10	1	10
n-Nitrosodiethylamine		<20	1	20
n-Nitroso-di-n-Butylamine		<20	1	20
PCB's, Total (*4)		<1	1	1
Pentachlorobenzene		<20	1	20
Pentachlorophenol		<50	1	50
Phenanthrene		<10	1	10
Pyridine		<20	1	20
1,2,4,5-Tetrachlorobenzene		<20	1	20
Tetrachloroethylene		<10	1	10
Trichloroethylene		<10	1	10
1,1,1-Trichloroethane		<10	1	10
2,4,5-Trichlorophenol		<50	1	50
TTHM (Total Trihalomethanes)		<10	1	10
Vinyl Chloride		<10	1	10

(\*1) Indicate units if different from µg/l.

(\*2) Hydrolyzes in water. Will not require applicant to analyze at this time.

(\*3) MAL's for Cresols: p-Chloro-m-Cresol 10 µg/l; 4,6-Dinitro-o-Cresol 50 µg/l; p-Cresol 10 µg/l

(\*4) Total of PCB-1242, PCB-1254, PCB-1221, PCB-1232, PCB-1248, PCB-1260, PCB-1016.

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5. TABLE B-3 contains testing requirements for the compound "Tributyltin" and for the indicator bacteria "enterococci." Not all applicants are required to test for tributyltin or enterococci. Testing is required only under the following conditions:

A. TRIBUTYLTIN

Testing will be required for 1) industrial/commercial facilities which directly dispose of wastewater from the types of operations listed below OR 2) domestic facilities which receive wastewater from the types of industrial/commercial operations listed below. Please check all that apply.

- ☐ 1) Manufacturers and formulators of tributyltin or related compounds, including, but not limited to SIC code 2879. Testing required.
- ☐ 2) Painting of ships, boats and marine structures, including, but not limited to SIC code 1721. Testing required.
- ☐ 3) Ship and boat building and repairing, including, but not limited to SIC codes 3731, 3732 and 3441. Testing required.
- ☐ 4) Ship and boat cleaning, salvage, wrecking and scaling, including, but not limited to SIC codes 4499 and 7699. Testing required.
- ☐ 5) Operation and maintenance of marine cargo handling facilities and marinas, including, but not limited to SIC codes 4491 and 4493. Testing required.
- ☐ 6) Facilities engaged in wood preserving, including, but not limited to, SIC code 2491. Testing required.
- ☐ 7) Any other industrial/commercial facility for which tributyltin is known to be present, or for which there is any reason to believe that tributyltin may be present in the effluent. Testing required.
- ☒ 8) None of the above. No testing required.

B. ENTEROCOCCI

Testing will be required for all dischargers directly into the Houston Ship Channel (classified stream segment nos. 1006 or 1007). Please check all that apply.

- ☐ 1) Discharge is directly to the Houston Ship Channel (classified stream segment number 1006 or 1007). Testing required.
- ☒ 2) Discharge is not directly to the Houston Ship Channel (classified stream segment number 1006 or 1007). No testing required.

TABLE B-3 N/A

OUTFALL \_\_\_\_\_

POLLUTANT	Concentration		Units	NUMBER OF SAMPLES	MAL (µg/l)
	AVG.	MAX.			
Tributyltin	_____	_____	_____	_____	0.010
Enterococci	_____	_____	_____	_____	N/A

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6. TABLE B-4 contains a list of pesticide compounds included in the Texas Surface Water Quality Standards at 30 TAC 307.6. TABLE B-4 must be completed if the facility manufactures or formulates pesticides or herbicides. Complete TABLE B-4 with the results of an analyses for each outfall that contains process wastewater or may contain pesticides or herbicides. Report an average and maximum value if more than one analytical result is available.

X N/A: This facility does not manufacture or formulate pesticides or herbicides.

TABLE B-4

N/A

OUTFALL 003

POLLUTANT	CONCENTRATION (µg/l) *		NUMBER OF SAMPLES	MAL (µg/l)
	AVG.	MAX.		
Aldrin				0.05
Alpha-hexachlorocyclohexane				0.05
Beta-hexachlorocyclohexane				0.05
Carbaryl				5
Chlordane				0.15
Chlorpyrifos				0.05
2,4-D				10
Danitol				----
4,4'-DDD				0.1
4,4'-DDE				0.1
4,4'-DDT				0.1
Demeton				0.2
Diazinon				0.5
Dicofol				20
Dieldrin				0.1
Diuron				----
Endosulfan I (alpha)				0.1
Endosulfan II (beta)				0.1
Endosulfan Sulfate				0.1
Endrin				0.1
Gamma - Hexachlorocyclohexane (Lindane)				0.05
Guthion				0.10
Heptachlor				0.05
Heptachlor Epoxide				1.0
Hexachlorophene				10
Malathion				0.10
Methoxychlor				2.0
Mirex				0.2
Parathion				0.1
Toxaphene				5
2,4,5-TP (Silvex)				2

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7. Review the following TABLE B-5 and mark the appropriate column with an "X" if you believe a specific constituent to be present or absent in your discharge. Base your determination on your knowledge of raw materials, maintenance chemicals, intermediates, and products handled at your facility and/or previous analyses of your wastewater. You must provide the results of at least one analysis for each constituent believed present. Report an average and maximum value if more than one analytical result is available.

TABLE B-5

OUTFALL 003

POLLUTANT	BELIEVED	BELIEVED	CONCENTRATION (mg/l) *		NUMBER OF SAMPLES
	PRESENT	ABSENT	AVG.	MAX	
Bromide	<u>      </u>	<u>  X  </u>	<u>      </u>	<u>&lt; 6</u>	<u>  1  </u>
Color(PCU)	<u>  X  </u>	<u>      </u>	<u>      </u>	<u>&lt; 5</u> Pt-Co	<u>  1  </u>
Nitrate-Nitrite(as N)	<u>  X  </u>	<u>      </u>	<u>      </u>	<u>0.1</u>	<u>  1  </u>
Sulfide(as S)	<u>      </u>	<u>  X  </u>	<u>      </u>	<u>&lt; 1</u>	<u>  1  </u>
Sulfite(as SO <sub>3</sub> )	<u>      </u>	<u>  X  </u>	<u>      </u>	<u>&lt; 2</u>	<u>  1  </u>
Surfactants	<u>      </u>	<u>  X  </u>	<u>      </u>	<u>&lt; 0.1</u>	<u>  1  </u>
Total Antimony	<u>      </u>	<u>  X  </u>	<u>      </u>	<u>&lt; 30</u> ug/l	<u>  1  </u>
Total Beryllium	<u>      </u>	<u>  X  </u>	<u>      </u>	<u>&lt; 5</u> ug/l	<u>  1  </u>
Total Boron	<u>  X  </u>	<u>      </u>	<u>      </u>	<u>404</u> ug/l	<u>  1  </u>
Total Cobalt	<u>      </u>	<u>  X  </u>	<u>      </u>	<u>&lt; 20</u> ug/l	<u>  1  </u>
Total Iron	<u>  X  </u>	<u>      </u>	<u>      </u>	<u>88.6</u> ug/l	<u>  1  </u>
Total Magnesium	<u>  X  </u>	<u>      </u>	<u>      </u>	<u>6,611</u> ug/l	<u>  1  </u>
Total Molybdenum	<u>      </u>	<u>  X  </u>	<u>      </u>	<u>&lt; 30</u> ug/l	<u>  1  </u>
Total Manganese	<u>  X  </u>	<u>      </u>	<u>      </u>	<u>66.7</u> ug/l	<u>  1  </u>
Total Thallium	<u>      </u>	<u>  X  </u>	<u>      </u>	<u>&lt; 10</u> ug/l	<u>  1  </u>
Total Tin	<u>      </u>	<u>  X  </u>	<u>      </u>	<u>&lt; 100</u> ug/l	<u>  1  </u>
Total Titanium	<u>      </u>	<u>  X  </u>	<u>      </u>	<u>&lt; 50</u> ug/l	<u>  1  </u>

\* Indicate units if different from mg/l.

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8. Table B-6 is a list of primary industrial categories with a breakdown of Gas Chromatography/Mass Spectrometry (GC/MS) testing requirements for Priority Pollutants. Categories are defined in 40 CFR Parts 400 - 471. Check any category(s) that apply to your facility and provide the indicated analysis for Priority Pollutants listed in Table B-6.

TABLE B-6

N/A	GC/MS Testing Required			
	Volatile	Acid	Base/Neutral	Pesticides
Adhesives and Sealants	Yes	Yes	Yes	No
Aluminum Forming	Yes	Yes	Yes	No
Auto and Other Laundries	Yes	Yes	Yes	Yes
Battery Manufacturing	Yes	No	Yes	No
Coal Mining	No	No	No	No
Coil Coating	Yes	Yes	Yes	No
Copper Forming	Yes	Yes	Yes	No
Electric and Electronic Components	Yes	Yes	Yes	Yes
Electroplating	Yes	Yes	Yes	No
Explosives Manufacturing	No	Yes	Yes	No
Foundries	Yes	Yes	Yes	No
Gum and Wood Chemicals				
Subparts A,B,C,E	Yes	Yes	No	No
Subparts D,F	Yes	Yes	Yes	No
Inorganic Chemicals	Yes	Yes	Yes	No
Iron and Steel Mfg.	Yes	Yes	Yes	No
Leather Tanning/Finishing	Yes	Yes	Yes	No
Mechanical Products Mfg.	Yes	Yes	Yes	No
Nonferrous Metals Mfg.	Yes	Yes	Yes	Yes
Ore Mining (Subpart B)	No	Yes	No	No
Organic Chemicals, Plastics and Synthetic Fibers	Yes	Yes	Yes	Yes
Paint and Ink Formulation	Yes	Yes	Yes	No
Pesticides	Yes	Yes	Yes	Yes
Petroleum Refining	Yes	Yes	Yes	No
Pharmaceutical Preparations	Yes	Yes	Yes	No
Photographic Equipment and Supplies	Yes	Yes	Yes	No
Plastic Processing	Yes	No	No	No
Porcelain Enameling	No	No	No	No
Printing and Publishing	Yes	Yes	Yes	Yes
Pulp and Paperboard Mills				
Subparts A,B,C,D,R	*	Yes	*	Yes
Subparts F,G,H,I, K,L,M,N,O,P,	Yes	Yes	*	Yes
Subparts E,Q,S,T	Yes	Yes	*	Yes
Subparts J,U	Yes	Yes	Yes	*
Rubber Processing	Yes	Yes	Yes	No
Soap and Detergent Mfg.	Yes	Yes	Yes	No
X Steam Electric Power Plants	Yes	Yes	No	No
Textile Mills (Not Subpart C)	Yes	Yes	Yes	No
Timber Products Processing	Yes	Yes	Yes	Yes

\* Test if "believed present"

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APPLICATIONS TEAM

9. Table B-7 contains a list of priority pollutants. If you are a primary industry as shown in Table B-6 and process wastewater is discharged, you must analyze for those GC/MS fractions as shown in Table B-7. If you are not a primary industry and if you believe that a specific constituent (except for: acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4,6 dinitrophenol) is present in an amount greater than 10 ppb you must provide the results of at least one analysis. If you believe that acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4,6 dinitrophenol is present in an amount greater than 100 ppb you must provide results for these chemicals. Base your determination on your knowledge of raw materials, maintenance chemicals, intermediates, and products handled at your facility or analysis of your wastewater. Report an average and a maximum value if more than one analytical result is available.

TABLE B-7

OUTFALL 003

POLLUTANT	CONCENTRATION (µg/l) *		NUMBER OF SAMPLES	MAL (µg/l)
	AVG.	MAX.		
VOLATILE COMPOUNDS				
Acrolein	_____	<50	1	50
Acrylonitrile	_____	<50	1	50
Benzene	_____	<10	1	10
Bromoform	_____	<10	1	10
Carbon Tetrachloride	_____	<10	1	10
Chlorobenzene	_____	<10	1	10
Chlorodibromomethane	_____	<10	1	10
Chloroethane	_____	<10	1	10
2-Chloroethylvinyl Ether	_____	<50	1	50
Chloroform	_____	<10	1	10
Dichlorobromomethane	_____	<10	1	10
1,1-Dichloroethane	_____	<10	1	10
1,2-Dichloroethane	_____	<10	1	10
1,1-Dichloroethylene	_____	<10	1	10
1,2-Dichloropropane	_____	<10	1	10
1,3-Dichloropropylene	_____	<10	1	10
Ethylbenzene	_____	<10	1	10
Methyl Bromide	_____	<20	1	20
Methyl Chloride	_____	<20	1	20
Methylene Chloride	_____	<20	1	20
1,1,2,2-Tetrachloroethane	_____	<10	1	10
Tetrachloroethylene	_____	<10	1	10
Toluene	_____	<10	1	10
1,2-Trans-Dichloroethylene	_____	<10	1	10
1,1,1-Trichloroethane	_____	<10	1	10
1,1,2-Trichloroethane	_____	<10	1	10
Trichloroethylene	_____	<10	1	10
Vinyl Chloride	_____	<10	1	10

\* Indicate units if different from µg/l

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APPLICATIONS SECTION

TABLE B-7 (con't)

OUTFALL 003

POLLUTANT	CONCENTRATION (µg/l) *		NUMBER OF SAMPLES	MAL (µg/l)
	AVG.	MAX.		
ACID COMPOUNDS				
2-Chlorophenol	_____	<10	1	10
2,4-Dichlorophenol	_____	<10	1	10
2,4-Dimethylphenol	_____	<10	1	10
4,6-Dinitro-o-Cresol	_____	<50	1	50
2,4-Dinitrophenol	_____	<50	1	50
2-Nitrophenol	_____	<20	1	20
4-Nitrophenol	_____	<50	1	50
P-Chloro-m-Cresol	_____	<10	1	10
Pentachlorophenol	_____	<50	1	50
Phenol	_____	<10	1	10
2,4,6-Trichlorophenol	_____	<10	1	10
BASE/NEUTRAL COMPOUNDS	N/A			
Acenaphthene	_____	_____	_____	10
Acenaphthylene	_____	_____	_____	10
Anthracene	_____	_____	_____	10
Benzidine	_____	_____	_____	50
Benzo(a)Anthracene	_____	_____	_____	10
Benzo(a)Pyrene	_____	_____	_____	10
3,4-Benzofluoranthene	_____	_____	_____	10
Benzo(ghi)Perylene	_____	_____	_____	20
Benzo(k)Fluoranthene	_____	_____	_____	10
Bis(2-Chloroethoxy)Methane	_____	_____	_____	10
Bis(2-Chloroethyl)Ether	_____	_____	_____	10
Bis(2-Chloroisopropyl)Ether	_____	_____	_____	10
Bis(2-Ethylhexyl)Phthalate	_____	_____	_____	10
4-Bromophenyl Phenyl Ether	_____	_____	_____	10
Butylbenzyl Phthalate	_____	_____	_____	10
2-Chloronaphthalene	_____	_____	_____	10
4-Chlorophenyl Phenyl Ether	_____	_____	_____	10
Chrysene	_____	_____	_____	10
Dibenzo(a,h)Anthracene	_____	_____	_____	20
1,2-Dichlorobenzene	_____	_____	_____	10
1,3-Dichlorobenzene	_____	_____	_____	10
1,4-Dichlorobenzene	_____	_____	_____	10
3,3-Dichlorobenzidine	_____	_____	_____	50
Diethyl Phthalate	_____	_____	_____	10
Dimethyl Phthalate	_____	_____	_____	10
Di-n-Butyl Phthalate	_____	_____	_____	10
2,4-Dinitrotoluene	_____	_____	_____	10
2,6-Dinitrotoluene	_____	_____	_____	10
Di-n-Octyl Phthalate	_____	_____	_____	10
1,2-Diphenyl Hydrazine (as Azobenzene)	_____	_____	_____	20

\* Indicate units if different from µg/l

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TABLE B-7 (con't)

OUTFALL 003

POLLUTANT	CONCENTRATION (µg/l) *		NUMBER OF SAMPLES	MAL (µg/l)
	AVG.	MAX.		
BASE/NEUTRAL COMPOUNDS (con't) N/A				
Fluoranthene	_____	_____	_____	10
Fluorene	_____	_____	_____	10
Hexachlorobenzene	_____	_____	_____	10
Hexachlorobutadiene	_____	_____	_____	10
Hexachlorocyclopentadiene	_____	_____	_____	10
Hexachloroethane	_____	_____	_____	20
Indeno (1,2,3-cd) pyrene	_____	_____	_____	20
Isophorone	_____	_____	_____	10
Naphthalene	_____	_____	_____	10
Nitrobenzene	_____	_____	_____	10
N-Nitrosodimethylamine	_____	_____	_____	20
N-Nitrosodi-n-Propylamine	_____	_____	_____	20
N-Nitrosodiphenylamine	_____	_____	_____	20
Phenanthrene	_____	_____	_____	10
Pyrene	_____	_____	_____	10
1,2,4-Trichlorobenzene	_____	_____	_____	10
PESTICIDES N/A				
Aldrin	_____	_____	_____	0.05
alpha-BHC	_____	_____	_____	0.05
beta-BHC	_____	_____	_____	0.05
gamma-BHC	_____	_____	_____	0.05
delta-BHC	_____	_____	_____	0.05
Chlordane	_____	_____	_____	0.15
4,4-DDT	_____	_____	_____	0.1
4,4-DDE	_____	_____	_____	0.1
4,4-DDD	_____	_____	_____	0.1
Dieldrin	_____	_____	_____	0.1
alpha-Endosulfan	_____	_____	_____	0.1
beta-Endosulfan	_____	_____	_____	0.1
Endosulfan Sulfate	_____	_____	_____	0.1
Endrin	_____	_____	_____	0.1
Endrin Aldehyde	_____	_____	_____	0.1
Heptachlor	_____	_____	_____	0.05
Heptachlor Epoxide	_____	_____	_____	1.0
PCB-1242	_____	_____	_____	1.0
PCB-1254	_____	_____	_____	1.0
PCB-1221	_____	_____	_____	1.0
PCB-1232	_____	_____	_____	1.0
PCB-1248	_____	_____	_____	1.0
PCB-1260	_____	_____	_____	1.0
PCB-1016	_____	_____	_____	1.0
Toxaphene	_____	_____	_____	5.0

\* Indicate units if different from µg/l

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APPLICATIONS

10. Under certain conditions, the applicant may be responsible for providing analyses of the effluent from its process wastewater outfalls for Dioxin/Furan compounds. Please review the conditions below and proceed as instructed. The applicant is required to report that 2,3,7,8 Tetrachlorodibenzo-P-Dioxin (TCDD) may be discharged if the applicant 1) knows or has reason to believe that TCDD or any congeners of TCDD will or may be present in the effluent or 2) uses or manufactures one of the following compounds:

- a. Please review the following compounds. Check those compounds which are manufactured and/or used in a process at the facility. Also provide a brief description of the conditions of its/their presence at the facility and then proceed to Item No. 10b. If none, then check N/A and proceed to Item No. 10b.

<u>      </u> X	N/A
<u>      </u>	2,4,5-trichlorophenoxy acetic acid (2,4,5-T) CAS #93-76-5
<u>      </u>	2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5-TP) CAS #93-72-1
<u>      </u>	2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon) CAS #136-25-4
<u>      </u>	0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate (Ronnel) CAS #299-84-3
<u>      </u>	2,4,5-trichlorophenol (TCP) CAS #95-95-4
<u>      </u>	Hexachlorophene (HCP) CAS #70-30-4

- b. If you know or have any reason to believe that 2,3,7,8 Tetrachlorodibenzo-P-Dioxin (TCDD) or any congeners of TCDD may be present in your effluent then give a brief description of the conditions for its presence below and then proceed to Item No. 10c below. If you do not have any reason to believe that TCDD may be present in your effluent then check N/A and proceed to Item No. 10c below.

       X    N/A

- c. If you checked N/A in both Item Nos. 10a and 10b above, then proceed to Item No. 11. Otherwise you must complete one analysis of a composite sample of each process wastewater outfall for Dioxin/Furan compounds. An additional sample of sludge from the wastewater treatment system must also be analyzed. The samples shall be analyzed and reported for congeners of chlorinated dibenzo-p-dioxins and dibenzofurans and also reported as toxicity equivalents (TEQ) based on the relative toxic equivalence factors provided in Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and Dibenzofurans (CDD's and CDF's) and 1989 Update, EPA/625/3-89/016, March 1989. TABLE 7 is provided to report the results of the congeners listed below in parts per quadrillion (ppq) for wastewater and parts per trillion (ppt) in sludges. The analyses should be made using EPA method 1613 or an equivalent method if approved by the TNRC.

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WASTEWATER PERMITS  
APPLICATIONS TEAM



TABLE B-8

Outfall _____	Wastewater		Sludge		MAL	
<u>Compound</u>	Equivalent Factors	Concen- tration (ppq)	Equiva- lents (ppq)	Concen- tration (ppt)	Equiva- lents (ppt)	(ppq)
2,3,7,8-TCDD	1	_____	_____	_____	_____	10.0
1,2,3,7,8-PeCDD	0.5	_____	_____	_____	_____	50.0
2,3,7,8-HxCDDs	0.1	_____	_____	_____	_____	50.0
2,3,7,8-TCDF	0.1	_____	_____	_____	_____	10.0
1,2,3,7,8-PeCDF	0.05	_____	_____	_____	_____	50.0
2,3,4,7,8-PeCDF	0.5	_____	_____	_____	_____	50.0
2,3,7,8-HxCDFs	0.1	_____	_____	_____	_____	50.0
Total			_____		_____	

## EXAMPLE:

<u>Compound</u>	Equivalent Factors	Concen- tration (ppq)	Equiva- lents (ppq)
2,3,7,8-TCDD	1	13	13
1,2,3,7,8-PeCDD	0.5	22	11
2,3,7,8-HxCDDs	0.1	17	1.7
2,3,7,8-TCDF	0.1	20	2
1,2,3,7,8-PeCDF	0.05	100	5
2,3,4,7,8-PeCDF	0.5	120	60
2,3,7,8-HxCDFs	0.1	100	10
Total TEQ			102.7

Test methods utilized must be sensitive enough to quantify the constituents at the Minimum Analytical Level (MAL) specified.

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APPLICATIONS

11. a. Please answer the following questions and proceed as directed.

Are there pollutants listed in Attachment H of this application which are believed present in the discharge?

YES \_\_\_\_\_ NO X

Are there pollutants listed in Item No. 3.c. on Page No. 2 of the Industrial Wastewater Permit Application Technical Report which are believed present in the discharge and have not been analytically quantified elsewhere in this application?

YES \_\_\_\_\_ NO X

If NO to both questions then go to Item No. 12 of this attachment.

If YES to either question then proceed as directed below.

- b. Table B-9 must be completed for pollutants listed in ATTACHMENT H and for pollutants related to materials handled on-site (raw materials, intermediate products, products, etc., as listed in Item No. 5 on Page No. 2 of the Industrial Wastewater Permit Application Technical Report), which are believed to be present in a wastewater discharge.

For analytical results that are non-detect, please report the analytical values as less than the detection level (example: a result that is non-detect with a detection level of 50 ug/l should be reported as "< 50 ug/l").

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APPLICATIONS SECTION

TABLE B-9

Outfall N/A

[illegible]

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APPLICATIONS

12. Table B-10 must be completed for all outfalls which discharges only storm water runoff associated with "industrial activity" and are not regulated by a multi-sector general storm water permit (please refer to Attachment K for specific guidance). The discharge must be sampled and analyzed for the following pollutants at least once by grab sample during the first 30 minutes or once by a flow weighted composite sample if equipment is available for compositing by flow:

TABLE B-10

Outfall	N/A	MAXIMUM VALUES (mg/l)		AVERAGE VALUES (mg/l)		Number of Storm Events Sampled
		Grab Sample Taken During First 30 Minutes	Flow Weighted Composite Sample	Grab Sample Taken During First 30 Minutes	Flow Weighted Composite Sample	
Pollutant						
Oil and Grease			N/A			
Biochemical Oxygen Demand (BOD5)						
Chemical Oxygen Demand						
Total Organic Carbon						
Total Suspended Solids						
Total Dissolved Solids						
Total Kjeldahl Nitrogen						
Nitrate plus Nitrite Nitrogen						
Ammonia Nitrogen						
Total Phosphorus						
pH (Standard Units)		Min	Max	Min	Max	
		MAXIMUM VALUES (µg/l)		AVERAGE VALUES (µg/l)		MAL µg/l
Total Aluminum			N/A			30.0
Total Arsenic						10.0
Total Barium						10.0
Total Cadmium						1.0
Total Chromium						10.0
Trivalent Chromium						N/A
Hexavalent Chromium						10.0
Total Copper						10.0
Total Lead						5.0
Total Mercury						0.2
Total Nickel						10.0
Total Selenium						10.0
Total Silver						2.0
Total Zinc						5.0

MAY 02 2000  
WASTEWATER PERMITS  
APPLICATIONS SECTION

13. Table B-11 must be completed for every outfall which discharges only storm water runoff associated with "industrial activity" and is not regulated by a multi-sector general storm water permit (please refer to Attachment K for specific guidance). Each discharge must be sampled and analyzed for the following pollutants at least once by grab sample during the first 30 minutes or once by a flow weighted composite sample if equipment is available for composting by flow. Do not include those pollutants listed previously in TABLE B-10.

N/A

- a. Include each pollutant that is limited in a USEPA Effluent Guideline to which the facility is subject (40 CFR Part 400 - 471) except those for which the monitoring frequency is less than once per month.
- b. Include each pollutant that is limited in an existing TNRCC, NPDES, and/or TPDES permit for process water for the facility except those for which the monitoring frequency is less than once per month.
- c. Include each pollutant from TABLES B-2, B-3, and B-4 that is used at the facility as a feedstock, intermediate, product, coproduct, byproduct, maintenance chemical or that could in any way contribute to contamination of storm water runoff.
- d. Include each pollutant from TABLES B-5, B-7, B-8, and B-9, and ATTACHMENT H that you know or have reason to believe is present in outfalls containing only storm water runoff.
  - (1) For pollutants listed from TABLE B-5, either report quantitative data from the analysis of a grab sample or a flow weighted composite sample or briefly describe the reasons the pollutant is expected to be discharged.
  - (2) For pollutants listed from TABLE B-7 (except for: acrolein, acrylonitrile, 2,4 dinitrophenol, and 2-methyl-4,6 dinitrophenol) that are expected to be discharged in concentrations of 10 ppb or greater, you must submit quantitative data from the analysis of at least one grab sample or one flow weighted composite sample.
  - (3) For acrolein, acrylonitrile, 2,4 dinitrophenol, and 2-methyl-4,6 dinitrophenol, you must submit quantitative data if any of these four pollutants is expected to be discharged in concentrations of 100 ppb or greater.
  - (4) For every pollutant listed from TABLE B-7 expected to be discharged in concentrations greater than 10 ppb (or 100 ppb for the four pollutants listed above) you must either submit quantitative data or briefly describe the reasons the pollutant is expected to be discharged.
  - (5) For pollutants listed from ATTACHMENT H, explain why the pollutant is believed to be present and report any analytical data that you have. No additional analysis is required.

N/A

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TABLE B-11

[illegible]

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APPLICATIONS TEAM

14. Please provide the following data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample:

a. Date of storm event: N/A

b. Duration of storm event(in minutes): N/A

c. Total rainfall during storm event (in inches): N/A

d. Number of hours between beginning of storm measured and end of previous measurable rain event: N/A

e. Maximum flow rate during rain event (gallons/minute): N/A

f. Total storm water flow from rain event (in gallons): N/A

g. Provide a description of the method of flow measurement or estimate:

N/A

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# MINIMUM ANALYTICAL LEVELS FOR APPLICATION SCREENING

POLLUTANT	CASRN*	MAL µg/l	Suggested Method
Aldrin	309-00-2	0.05	608
Alphahexachlorocyclohexane	319-84-6	0.05	608
Aluminum	7429-90-5	30	202.2
Arsenic	7440-38-2	10	206.2
Barium	7440-39-3	10	208.2
Benzene	71-43-2	10	624
Benzidine	92-87-5	50	625
Benzo [a] anthracene	56-55-3	10	625
Benzo [a] pyrene	50-32-8	10	625
Betahexachlorocyclohexane	319-85-7	0.05	608
Bis(chloromethyl) ether	542-88-1	**	**
Cadmium	7440-43-9	1	213.2
Carbon Tetrachloride	56-23-5	10	624
Carbaryl	63-25-2	5	632
Chlordane	57-74-9	0.15	608
Chlorobenzene	108-90-7	10	624
Chloroform	67-66-3	10	624
Chloropyrifos	2921-88-2	0.05	1657
Chromium	7440-47-3	10	218.2
Hexavalent Chromium	7440-47-3	10	218.4
Trivalent Chromium	7440-47-3	***	***
p-Chloro-m-Cresol	59-50-7	10	625
4,6-Dinitro-o-Cresol	534-52-1	50	625
p-Cresol	106-44-5	10	625
Copper	7440-50-8	10	220.2
Chrysene	218-01-9	10	625
Total Cyanide	57-12-5	10	335.2

INDUSTRIAL WASTEWATER PERMITS  
APPLICATIONS TEAM



POLLUTANT	CASRN*	MAL µg/l	Suggested Method
Cyanide, Amenable to Chlorination	57-12-5	20	335.1
Cyanide, Weak Acid Dissociable	57-12-5	20	4500-CN I.
4,4'-DDD	72-54-8	0.1	608
4,4'-DDE	72-55-9	0.1	608
4,4'-DDT	50-29-3	0.1	608
2,4-D	94-75-7	10	615
Danitrol	39515-41-8	****	****
Demeton	8065-48-3	0.20	1657
Diazinon	333-41-5	0.5	1657
Dibromochloromethane	124-48-1	10	624
1,2-Dibromoethane	106-93-4	2	618
Dieldrin	60-57-1	0.1	608
1,4-Dichlorobenzene	106-46-7	10	625
1,2-Dichloroethane	107-06-2	10	624
1,1-Dichloroethylene	75-35-4	10	624
Dicofol	115-32-2	20	617
Dioxins/Furans (TCDD Equivalents)			
2,3,7,8-TCDD	1746-01-6	10 <sup>-5</sup> or ppq	1613
1,2,3,7,8-PeCDD	40321-76-4	50	
2,3,7,8-HxCDDs			
1,2,3,4,7,8-HxCDD	39227-28-6	50	
1,2,3,6,7,8-HxCDD	57653-85-7	50	
1,2,3,7,8,9-HxCDD	19408-74-3	50	
2,3,7,8-TCDF	51207-31-9	10	
1,2,3,7,8-PeCDF	57117-41-6	50	
2,3,4,7,8-PeCDF	57117-31-4	50	
2,3,7,8-HxCDFs			
1,2,3,4,7,8-HxCDF	70648-26-9	50	
1,2,3,6,7,8-HxCDF	57117-44-9	50	
1,2,3,7,8,9-HxCDF	72918-21-9	50	
2,3,4,6,7,8-HxCDF	60851-34-5	50	
Endosulfan I (Alpha)	115-29-7	0.1	608
Endosulfan II (Beta)	115-29-7	0.1	608
Endosulfan sulfate	1031-07-8	0.1	608
Endrin	72-20-8	0.1	608
Fluoride	16984488	500	340.3
Gammahexachlorocyclohexane (Lindane)	58-89-9	0.05	608

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POLLUTANT	CASRN*	MAL µg/l	Suggested Method
Guthion	86-50-0	0.1	1657
Heptachlor	76-44-8	0.05	608
Heptachlor Epoxide	1024-57-3	1.0	608
Hexachlorobenzene	118-74-1	10	625
Hexachlorobutadiene	87-68-3	10	625
Hexachloroethane	67-72-1	20	625
Hexachlorophene	70-30-4	10	604.1
Lead	7439-92-1	5.0	239.2
Malathion	121-75-5	0.1	1657
Mercury	7439-97-6	0.2	245.1
Methoxychlor	72-43-5	2.0	617
Methyl Ethyl Ketone	78-93-3	50	624
Mirex	2385-85-5	0.2	617
Nitrate-Nitrogen	14797-55-8	1000	352.1
Nickel	7440-02-0	10	249.2
Nitrobenzene	98-95-3	10	625
N-Nitrosodiethylamine	55-18-5	20	625
N-Nitroso-di-n-Butylamine	924-16-3	20	625
Parathion	56-38-2	0.1	1657
Pentachlorobenzene	608-93-5	20	625
Pentachlorophenol	87-86-5	50	625
Phenanthrene	85-01-8	10	625
Polychlorinated Biphenyls (PCBs)			
PCB-1232	1336-36-3	1.0	608
PCB-1242	1336-36-3	1.0	
PCB-1254	1336-36-3	1.0	
PCB-1221	1336-36-3	1.0	
PCB-1248	1336-36-3	1.0	
PCB-1260	1336-36-3	1.0	
PCB-1016	1336-36-3	1.0	
Pyridine	110-86-1	20	625
Selenium	7782-49-2	10.0	270.2
Silver	7440-22-4	2.0	272.2
1,2,4,5-Tetrachlorobenzene	95-94-3	20	625
Tetrachloroethylene	127-18-4	10	624

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POLLUTANT	CASRN*	MAL µg/l	Suggested Method
Toxaphene	8001-35-2	5.0	608
2,4,5-TP (Silvex)	93-72-1	2.0	615
Tributyltin	688-73-3	0.010	TNRCC 1001
2,4,5-Trichlorophenol	95-95-4	50	625
Trichloroethylene	79-01-6	10	624
1,1,1-Trichloroethane	71-55-6	10	624
TTHM (Total)			
Chloroform	67-66-3	10	624
Bromoform	75-25-2	10	
Dichlorobromomethane	75-27-4	10	
Chlorodibromomethane	124-48-1	10	
Vinyl Chloride	75-01-4	10	624
Zinc	7440-66-6	5.0	289.2

\* Chemical Abstracts Service Registry Number

\*\* Hydrolyzes in water. Will not require applicant to analyze at this time.

\*\*\* Trivalent Chromium (Cr) determined by subtracting Hexavalent Cr from Total Cr.

\*\*\*\* EPA procedure not approved. Will not require applicant to analyze at this time.

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APPLICATIONS DIVISION

N/A

ATTACHMENT C

LAND DISPOSAL OF EFFLUENT

ATTACHMENT C IS REQUIRED FOR APPLICATIONS (NEW, AMENDMENT, OR RENEWAL) FOR FACILITIES REQUESTING AUTHORIZATION FOR DISPOSAL OF TREATED WASTEWATER VIA LAND APPLICATION.

Are you currently authorized or requesting new authorization to use land application as a method of disposal for treated effluent?

YES \_\_\_\_\_ NO X If YES, complete this attachment. If NO, do not complete and do not submit this attachment with the technical report.

Are you 1) currently authorized in your existing permit to utilize land application for disposal of your effluent AND 2) this permit application is NOT requesting changes from your existing permit conditions for those operations?

YES \_\_\_\_\_ NO \_\_\_\_\_ If YES, only items 1 through 11 are required.

Are you 1) currently authorized in your existing permit to utilize land application for disposal of your effluent AND 2) this permit application is requesting changes from your existing permit conditions for those operations?

YES \_\_\_\_\_ NO \_\_\_\_\_ If YES, items 1 through 15 are required.

Are you seeking a new authorization for the land application for disposal of effluent by either a new permit application or an amendment permit application of an existing facility not currently authorized for land disposal of effluent?

YES \_\_\_\_\_ NO \_\_\_\_\_ If YES, items 1 through 15 are required.

1. Disposal System:

( ) Surface Disposal:  
Evaporation  
Irrigation

( ) Subsurface Disposal:  
Absorption  
Percolation fields  
Evapotranspiration beds  
Subsurface soils absorption

( ) Other (describe)  
\_\_\_\_\_  
\_\_\_\_\_

2. Is the proposed/existing disposal site within the 100-year frequency flood level? YES \_\_\_\_\_ NO \_\_\_\_\_

If YES, describe how the site will be protected from inundation.  
\_\_\_\_\_  
\_\_\_\_\_

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3. Provide the following information if using irrigation for land disposal:

Area acres	Effluent Application Gallons/Day	Describe land use and indicate type of crop(s) - (alfalfa or wheat, park, golf course, landscape, etc.)	Public Access YES/NO
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

For non-public access areas, describe access controls.

\_\_\_\_\_  
\_\_\_\_\_

4. Total surface area of storage pond(s): \_\_\_\_\_ acres

Total storage volume of storage pond(s): \_\_\_\_\_ million gallons

Provide dimensions (length, width, water depth, and freeboard) of each effluent storage/holding pond.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Describe the effluent storage/holding pond liner (e.g., compacted clay, synthetic liner, other).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. Describe tailwater control facilities and operations, and describe how rainfall runoff will be controlled such that extraneous waters do not enter the land application site?

\_\_\_\_\_  
\_\_\_\_\_

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6. Provide the monitoring data for the previous 24 months for the parameters that are regulated in the current permit. Provide the 30-day average data if the permit includes a 30-day average limit. If the permit includes only a single grab limit, provide the maximum single grab value for the month. If monitoring is not required for any of the following parameters, indicate N/A.

[illegible]

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Explain any persistent excursions and discuss any corrective actions for the parameters shown in the above table and for pH, chlorine residual or other parameters that are regulated in the current permit.

7. Submit an annual cropping plan that includes but is not limited to the following:
- a. A soils map depicting the location of the crops currently being grown. These locations should be identified by field and crop.
  - b. Type of crops and acreage irrigated for each crop.
  - c. Growing seasons for each crop.
  - d. Nutrient requirements for each crop.
  - e. Additional fertilizer requirements for each crop, proposed additional fertilizer applications for each crop, and methods of fertilizer application for each crop.
  - f. Supplemental watering requirements for each crop.
  - g. Salt tolerances of each crop.
  - h. Harvesting method and number of harvests per year for each crop.
8. Describe the application method and equipment, (e.g., row irrigation, spray irrigation using a center pivot sprinkler system, etc.). Estimate the irrigation efficiency.
9. Disposal Requirements (complete applicable section and include design calculations; include all assumptions, such as runoff, evaporation, evapotranspiration, etc.):
- a. Irrigation
    - Area under irrigation: \_\_\_\_\_ acres
    - Design application frequency: \_\_\_\_\_ hours/day
    - \_\_\_\_\_ days/week
    - Land grade:     average: \_\_\_\_\_ percent (%)
    - maximum: \_\_\_\_\_ percent (%)
    - Design application rate: \_\_\_\_\_ acre-feet/acre/year
    - Design Total Nitrogen loading rate: \_\_\_\_\_ lbs N/acre/day
- Provide a separate engineering report of water balance and storage volume calculations in accordance with 30 TAC Section 309.20, Subchapter C, Land Disposal of Sewage Effluent. Describe the method of application and provide a nitrogen balance for the crop system.

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b. Overland Flow

Area utilized for application: \_\_\_\_\_ acres  
Slopes for application area: \_\_\_\_\_ percent (%)  
Design application rate: \_\_\_\_\_ gpm/foot of slope width  
Slope length: \_\_\_\_\_ feet  
Design BOD<sub>5</sub> loading rate: \_\_\_\_\_ lbs BOD<sub>5</sub>/acre/day  
Design application frequency: \_\_\_\_\_ hours/day  
\_\_\_\_\_ days/week

Describe the method of application and design requirements in accordance with 30 TAC Section 317.10, Appendix B, Overland Flow Process.

c. Evaporation Ponds

Daily average effluent flow  
into pond(s): \_\_\_\_\_ gallons per day  
Surface area of pond(s): \_\_\_\_\_ acres  
Storage volume of pond(s): \_\_\_\_\_ million gallons

Provide a separate engineering report of water balance and storage volume calculations for average long term conditions and worse case conditions (i.e. high rainfall and low evaporation).

d. Evapotranspiration Beds

Number of beds: \_\_\_\_\_  
Area of bed(s): \_\_\_\_\_ acres  
Depth of bed(s): \_\_\_\_\_ feet  
Void ratio of soil in the beds: \_\_\_\_\_  
Storage volume within the beds: \_\_\_\_\_

Describe any lining to protect groundwater. Provide a separate engineering report of water balance and storage volume calculations.

e. Subsurface Soil Absorption

Type of Disposal System:  
\_\_\_\_\_ Conventional Drainfield, Beds, or Trenches  
\_\_\_\_\_ Graveless Pipe  
\_\_\_\_\_ Pressure Dosing  
\_\_\_\_\_ Mound System  
\_\_\_\_\_ Drip/Trickle Irrigation  
\_\_\_\_\_ Other \_\_\_\_\_

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Application area: \_\_\_\_\_ acres  
 Application rate: \_\_\_\_\_ gal/square feet/day  
 Area of trench: \_\_\_\_\_ square feet  
 Number of beds: \_\_\_\_\_  
 Area of bed(s): \_\_\_\_\_ square feet  
 Area of drainfield: \_\_\_\_\_ square feet  
 Depth to groundwater: \_\_\_\_\_ feet  
 Dosing duration per area: \_\_\_\_\_ hours  
 Infiltration Rate: \_\_\_\_\_ inches/hour  
 Storage volume: \_\_\_\_\_ gallons  
 Soil Classification: \_\_\_\_\_

Include all information as required in 30 TAC Section 309.20, Subchapter C, Land Disposal of Sewage Effluent. Describe the schedule of rotation for dosing basins.

10. Indicate the exact boundaries of the disposal operation on the original USGS topographic map (7.5-minute scale) of the area.
11. Provide a scale drawing and indicate on the original USGS topographic map (7.5-minute scale) all land which is to be a part of the disposal operation in addition to the following: on-site buildings, waste disposal or treatment facilities, effluent storage and tail water control facilities, buffer zones and water wells within 1 mile radius of disposal site boundaries.

Identify the water uses from each water well within a half-mile radius of the disposal site boundaries. In addition, provide aspects of construction such as well logs, casing, yield, static elevation, water quality, and age for each well. Submit copies of State Water Well Reports (driller's logs, completion data), and data on depths to ground water for water supply wells including a description of how the depths to ground water were obtained. Local groundwater resources below the wastewater disposal site shall be monitored to establish preoperational baseline groundwater quality for the following: total dissolved solids, nitrate-nitrogen, chlorides, sulfates, pH, and coliform bacteria.

12. On a U.S. Department of Agriculture (USDA) Natural Resources Conservation Service Soil Survey Map, accurately locate the area to be used for land application. Include engineering properties (No. 200 Sieve, Liquid Limit, Plasticity), soil name and mapping symbol, USDA textures and associated depths for each texture class, soil permeability for each texture class, and seasonal high water table.

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13. Provide analyses of the soil in the land application area for pH, conductivity, sodium adsorption ratio (SAR), total nitrogen, nitrate-nitrogen, potassium, phosphorous, calcium, magnesium, sulphur, and sodium. The nutrient parameters should be analyzed on a plant available or extractable basis. All results shall be reported in mg/kg dry weight basis (parts per million). When reporting the results, include all information pertaining to fertilizer recommendations. Composite sampling techniques should be used when sampling the irrigation tract. Individual soil types, as defined by the USDA Natural Resources Conservation Service soil survey, should be sampled individually at zones of 0-6, 6-18, and 18-30 inches. Each composite sample shall represent no more than 40 acres for areas located east of Interstate Highway 35 and 80 acres for areas located west of Interstate Highway 35. Each composite sample shall consist of no less than 15 subsamples. Subsamples shall be composited by zone and according to type of crop and soil for analysis and reporting.
14. Do you plan to install ground water monitoring wells or lysimeters around the land application site? . YES \_\_\_\_\_ NO \_\_\_\_\_  
If YES, submit a map indicating the location, designation, and depth of each monitor well.
15. For waste disposal activities subject to 30 TAC Chapter 213, Edwards Aquifer Rules, provide a report that describes the surface geologic units present in the proposed land application site and identifies the location and extent of any significant recharge areas in the land application site.

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## ATTACHMENT D

### TOXICITY TESTING INSTRUCTIONS

#### Toxicity Testing

To determine if your facility has a reasonable potential to cause or to contribute to receiving water toxicity, the TNRCC requires that the test results of laboratory aquatic toxicity tests performed on the effluent from the following wastewaters be submitted:

1. Process wastewater outfalls and any other continuous discharge outfalls from an industrial facility subject to EPA Categorical Standards (40 CFR 400-471).
2. Process wastewater outfalls and any other continuous discharge outfalls from an industrial facility classified as an EPA Major.
3. Treated domestic wastewater from outfalls at flows of 1 MGD or greater.

External outfalls conducting routine toxicity testing as a requirement of the currently issued wastewater discharge permit do not need to be re-tested. Internal outfalls also do not need to be tested.

For those outfalls that meet one or more of criteria 1-3 above, and are not currently being tested, the TNRCC will review the test results to determine the need for continued toxicity testing as a permit requirement as well as the need for an effluent toxicity limit.

#### Test Methods

The permittee shall perform two of the following toxicity tests using effluent collected from the facility. If the discharge enters freshwater (salinity of receiving water less than 2 parts per thousand), the applicant shall perform test numbers 1 and 2 below. If the discharge enters saltwater (salinity of receiving water equal to or greater than 2 parts per thousand), the applicant shall perform test numbers 3 and 4 below. Dischargers are encouraged to contact the Water Quality Assessment Team of the Water Quality Division to obtain assistance regarding the nature of the receiving water and the appropriateness of the freshwater or marine test species.

All test organisms, procedures, and quality assurance requirements used shall be in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition" (EPA/600/4-90/027F), or the latest revision of this document. The following tests shall be used:

1. Acute 24-hour static toxicity test using Daphnia pulex. A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.
2. Acute 24-hour static toxicity test using the fathead minnow (Pimephales promelas). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

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3. Acute 24-hour static toxicity test using Mysidopsis bahia. A minimum of five (5) replicates with eight (8) organisms per replicate be used for this test.
4. Acute 24-hour static toxicity test using the Inland Silverside minnow (Menidia beryllina). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

#### Toxicity Test Dilution Series

Five effluent concentrations, in addition to a control (0% effluent) shall be used in the toxicity tests. These additional effluent concentrations shall be 6%, 13%, 25%, 50%, and 100%.

#### Sample Collection

The effluent sample shall be collected at a point following the last treatment unit. A flow-weighted 24-hour composite sample will be collected from the discharge point for use during the toxicity test. A 24-hour composite sample consists of a minimum of twelve (12) effluent portions collected at equal time intervals and combined proportional to flow or a sample continuously collected proportional to flow over a 24-hour operating day.

#### Dilution Water

For tests 1 and 2, dilution water used in the toxicity tests shall be moderately hard synthetic water. For tests 3 and 4, dilution water used in the toxicity tests shall be hypersaline brine or synthetic seawater.

#### Reporting Requirements

Facilities shall determine and report the 24-hour LC50 for each species tested. Additionally the applicant shall report the mean survival (for each species) at each effluent dilution following the 24 hour exposure. The applicant shall prepare a full report of the results according to "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition" (EPA 600/4-90/027F), Section 12, Report Preparation. The applicant shall submit the following information as an attachment to the application:

- ① The full report.
2. Table D-1 or D-2 (as appropriate), including LC50 data and mean survival (Table D-1 & D-2 forms are provided).

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Permittee Southwest Electric Power Company - Welsh Power Station - Outfall 101  
TNRCC Permit Number 01811-101

TABLE 2 (SHEET 1 OF 2)

*DAPHNIA PULEX* SURVIVAL

Dates and Times  
Composite Collected

	Date	Time		Date	Time
FROM:	<u>07/11/99</u>	<u>0730</u>	TO:	<u>07/12/99</u>	<u>0805</u>

Test Initiated: 1615 07/13/99 date

PERCENT SURVIVAL

REP	0%	6%	13%	25%	50%	100%
A	100.0	N/A	N/A	N/A	N/A	100.0
B	100.0	N/A	N/A	N/A	N/A	87.5
C	100.0	N/A	N/A	N/A	N/A	100.0
D	100.0	N/A	N/A	N/A	N/A	100.0
E	100.0	N/A	N/A	N/A	N/A	100.0
Mean	100.0	N/A	N/A	N/A	N/A	97.5

Enter percent effluent corresponding to the LC50 below:

LC50 (*D. pulex*) = N/A % effluent


95% confidence limits: N/A

Method of LC50 calculation: N/A

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WASTEWATER PERMITS  
APPLICATIONS TEAM

Prepared by:  Huther & Associates

Permittee Southwest Electric Power Company - Welsh Power Station - Outfall 101  
TNRCC Permit Number 01811-101

TABLE 2 (SHEET 2 OF 2)

*PIMEPHALES PROMELAS* SURVIVAL

Dates and Times  
Composite Collected

	Date	Time		Date	Time
FROM:	<u>07/11/99</u>	<u>0730</u>	TO:	<u>07/12/99</u>	<u>0805</u>

Test Initiated: 1500 07/13/99 date

PERCENT SURVIVAL

REP	0%	6%	13%	25%	50%	100%
A	100.0	N/A	N/A	N/A	N/A	100.0
B	100.0	N/A	N/A	N/A	N/A	100.0
C	100.0	N/A	N/A	N/A	N/A	100.0
D	100.0	N/A	N/A	N/A	N/A	100.0
E	100.0	N/A	N/A	N/A	N/A	100.0
Mean	100.0	N/A	N/A	N/A	N/A	100.0

Enter percent effluent corresponding to the LC50 below:

LC50 (*P. promelas*) = N/A % effluent

95% confidence limits: N/A

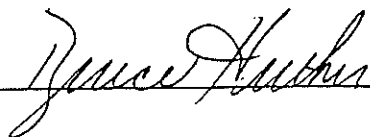
Method of LC50 calculation: N/A

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APPLICATIONS TEAM

Prepared by:



Huther & Associates

TABLE 1 (SHEET 1 OF 4)

## BIOMONITORING REPORTING FORM

## CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

Dates and Times Composites Collected			DATE	TIME		DATE	TIME
			10/18/99	0832		10/18/99	0832
			10/19/99	0723		10/20/99	0805
			10/21/99	0815		10/22/99	0858

Test initiated: 1415 10/19/99 dateDilution water used: Receiving water X Synthetic Dilution water

## NUMBER OF YOUNG PRODUCED PER FEMALE @ 7 DAYS

REP	Percent effluent (%)					
	0%	7%	9%	12%	16%	21%
A	24	26	25	27	24	26
B	27	29	29	27	28	22
C	25	29	26	25	24	24
D	27	28	24	28	26	28
E	27	26	29	24	27	25
F	26	26	23	26	24	25
G	28	29	28	26	27	24
H	29	30	25	25	26	24
I	25	27	28	23	23	28
J	29	27	27	D-0	27	26
Surviv. Mean	26.7	27.7	26.4	25.7	25.6	25.2
Total Mean	26.7	27.7	26.4	23.1	25.6	25.2
CV%*	6.38	5.40	8.03	6.16	6.69	7.44

\* coefficient of variation = standard deviation x 100/mean (calculation based on young of the surviving females)  
Designate males (M), and dead females (D-x), along with number of neonates (x) released prior to death.

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WASTEWATER PERMITS  
APPLICATIONS TEAMPrepared by: Jane Huther

Huther &amp; Associates

TABLE 1 (SHEET 2 OF 4)

## BIOMONITORING REPORTING FORM

*CERIODAPHNIA DUBIA* SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per female significantly less ( $p=0.05$ ) than the number of young per female in the control for the % effluent corresponding to (significant nonlethal effects):

a.) LOW FLOW OR CRITICAL DILUTION ( 16 % )            YES   X   NO

## PERCENT SURVIVAL

Time of Reading	Percent effluent (%)					
	0%	7%	9%	12%	16%	21%
24 hour	100.0	100.0	100.0	100.0	100.0	100.0
48 hour	100.0	100.0	100.0	100.0	100.0	100.0
End of Test	100.0	100.0	100.0	90.0	100.0	100.0
CV%	0.00	0.00	0.00	35.14	0.00	0.00

2. Fisher Exact Test:

Is the mean survival at test end significantly less ( $p=0.05$ ) than the control survival for the % effluent corresponding to (lethality):

a.) LOW FLOW OR CRITICAL DILUTION ( 16 % )            YES   X   NO

3. Enter percent effluent corresponding to each NOEC (no observed effect concentration) below and circle the lowest number:

a.) NOEC Survival =   21   % effluent

b.) NOEC Reproduction =   21   % effluent

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APPLICATIONS TEAM

Prepared by:

*Yancey Luther*

Huther & Associates



TABLE 1 (SHEET 3 OF 4)

## BIOMONITORING REPORTING FORM

*PIMEPHALES PROMELAS* SURVIVAL AND GROWTH

Dates and Times Composites Collected			DATE	TIME		DATE	TIME
	No. 1	FROM:	<u>10/18/99</u>	<u>0832</u>	TO:	<u>10/18/99</u>	<u>0832</u>
	No. 2	FROM:	<u>10/19/99</u>	<u>0723</u>	TO:	<u>10/20/99</u>	<u>0805</u>
	No. 3	FROM:	<u>10/21/99</u>	<u>0815</u>	TO:	<u>10/22/99</u>	<u>0858</u>

Test initiated: 1520 10/19/99 dateDilution water used: Receiving water X Synthetic Dilution water

## FATHEAD MINNOW GROWTH DATA

Effluent Concentration (%)	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%	0.3620	0.4210	0.4310	0.4410	0.4090	0.4128	7.46
7%	0.3960	0.4520	0.4460	0.4390	0.4520	0.4370	5.39
9%	0.4380	0.4560	0.4260	0.4480	0.4390	0.4414	2.56
12%	0.3970	0.4520	0.4460	0.4160	0.4060	0.4234	5.77
16%	0.4520	0.4460	0.4390	0.4270	0.3820	0.4292	6.52
21%	0.4470	0.3720	0.3980	0.4560	0.4620	0.4270	9.32

\* coefficient of variation = standard deviation x 100/mean

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean dry weight (growth) at 7 days significantly less ( $p=0.05$ ) than the control's dry weight (growth) for the % effluent corresponding to (significant nonlethal effects):


a.) LOW FLOW OR CRITICAL DILUTION ( 16% ) YES X NO

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WASTEWATER PERMITS  
APPLICATIONS TEAM

Prepared by:



Huther &amp; Associates

TABLE 1 (SHEET 4 OF 4)

## BIOMONITORING REPORTING FORM

## PIMEPHALES PROMELAS SURVIVAL AND GROWTH

## FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration (%)	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0%	75.0	100.0	100.0	100.0	100.0	100.0	100.0	95.0	11.77
7%	87.5	100.0	100.0	100.0	100.0	100.0	100.0	97.5	5.73
9%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00
12%	87.5	100.0	100.0	87.5	87.5	100.0	100.0	92.5	7.40
16%	100.0	100.0	100.0	100.0	87.5	100.0	100.0	97.5	5.73
21%	100.0	75.0	87.5	100.0	100.0	100.0	100.0	92.5	12.09

\* coefficient of variation = standard deviation x 100/mean

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7 days significantly less ( $p=0.05$ ) than the control survival for the % effluent corresponding to:

a.) LOW FLOW OR CRITICAL DILUTION ( 16 % )            YES   X   NO

3. Enter percent effluent corresponding to each NOEC (no observed effect concentration) below and circle the lowest number:

a.) NOEC Survival =   21   % effluent

b.) NOEC Growth =   21   % effluent

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## TABLE 2 (Sheet 1 of 2)

*Ceriodaphnia dubia* Survival

Permittee: Southwestern Electric Power Company - Welsh Power Station  
 TNRCC No.: 01811-301  
 Outfall No.: 301

Date Composite Collected FROM: 07/11/99 TO: 07/12/99 Time Composite Collected FROM: 0745 TO: 0755

Test initiated: 1415 07/13/99 date

DATA TABLE FOR *CERIODAPHNIA DUBIA* PERCENT SURVIVAL

TIME	0%	6%	13%	25%	50%	100%
START	100.0	N/A	N/A	N/A	N/A	100.0
24 HOUR	100.0	N/A	N/A	N/A	N/A	100.0
MEAN	100.0	N/A	N/A	N/A	N/A	100.0

Data extracted from chronic test initiated on July 13, 1999

Enter percent effluent corresponding to the LC50 below:

LC50 (*C. dubia*) = N/A % effluent

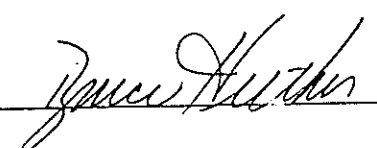
95% confidence limits: N/A

Method of LC50 calculation: N/A

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WASTEWATER PERMITS  
APPLICATIONS TEAM

Prepared by: 

Huther & Associates

*Pimephales promelas* Survival

Permittee: Southwestern Electric Power Company - Welsh Power Station  
 TNRCC No.: 01811-301  
 Outfall No.: 301

Date Composite Collected FROM: 07/11/99 TO: 07/12/99 Time Composite Collected FROM: 0745 TO: 0755

Test initiated: 1445 07/13/99 date

DATA TABLE FOR *PIMEPHALES PROMELAS* PERCENT SURVIVAL

TIME	REP	0%	6%	13%	25%	50%	100%
24H	A	100.0	N/A	N/A	N/A	N/A	100.0
	B	100.0	N/A	N/A	N/A	N/A	100.0
	C	100.0	N/A	N/A	N/A	N/A	100.0
	D	100.0	N/A	N/A	N/A	N/A	100.0
	E	100.0	N/A	N/A	N/A	N/A	100.0
	Mean	100.0	N/A	N/A	N/A	N/A	100.0

Data extracted from chronic test initiated on July 13, 1999

Enter percent effluent corresponding to the LC50 below:

LC50 (*P. promelas*) = N/A % effluent

95% confidence limits: N/A

Method of LC50 calculation: N/A

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Prepared by: Bruce Huth

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TABLE 1 (SHEET 1 OF 4)

## BIOMONITORING REPORTING FORM

*CERIODAPHNIA DUBIA* SURVIVAL AND REPRODUCTION

			DATE	TIME				DATE	TIME
Dates and Times Composites Collected	No. 1	FROM:	<u>10/17/99</u>	<u>0830</u>	TO:	<u>10/18/99</u>	<u>0815</u>		
	No. 2	FROM:	<u>10/19/99</u>	<u>0745</u>	TO:	<u>10/20/99</u>	<u>0823</u>		
	No. 3	FROM:	<u>10/21/99</u>	<u>0825</u>	TO:	<u>10/22/99</u>	<u>0845</u>		

Test initiated: 1415 10/19/99 dateDilution water used: Receiving water X Synthetic Dilution water

## NUMBER OF YOUNG PRODUCED PER FEMALE @ 7 DAYS

REP	Percent effluent (%)					
	0%	32%	42%	56%	75%	100%
A	27	28	26	26	26	25
B	26	27	26	26	25	27
C	27	27	26	28	27	26
D	27	25	26	26	26	25
E	28	26	27	28	27	27
F	27	27	26	27	27	26
G	27	28	26	27	28	27
H	28	27	26	27	26	26
I	28	25	26	26	27	26
J	27	27	26	27	25	28
Surviv. Mean	27.2	26.7	26.1	26.8	26.4	26.3
Total Mean	27.2	26.7	26.1	26.8	26.4	26.3
CV.%*	2.33	3.97	1.21	2.94	3.66	3.61

\* coefficient of variation = standard deviation x 100/mean (calculation based on young of the surviving females)  
 Designate males (M), and dead females (D-x), along with number of neonates (x) released prior to death.

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Prepared by: *James Huther*WASTE WATER PERMITS  
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TABLE 1 (SHEET 2 OF 4)

## BIOMONITORING REPORTING FORM

## CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per female significantly less ( $p=0.05$ ) than the number of young per female in the control for the % effluent corresponding to (significant nonlethal effects):

a.) LOW FLOW OR CRITICAL DILUTION ( 100 % ) \_\_\_\_\_ YES \_\_\_\_\_ X NO

## PERCENT SURVIVAL

Time of Reading	Percent effluent (%)					
	0%	32%	42%	56%	75%	100%
24 hour	100.0	100.0	100.0	100.0	100.0	100.0
48 hour	100.0	100.0	100.0	100.0	100.0	100.0
End of Test	100.0	100.0	100.0	100.0	100.0	100.0
CV%	0.00	0.00	0.00	0.00	0.00	0.00

2. Fisher Exact Test:

Is the mean survival at test end significantly less ( $p=0.05$ ) than the control survival for the % effluent corresponding to (lethality):

a.) LOW FLOW OR CRITICAL DILUTION ( 100 % ) \_\_\_\_\_ YES \_\_\_\_\_ X NO

3. Enter percent effluent corresponding to each NOEC (no observed effect concentration) below and circle the lowest number:

a.) NOEC Survival = 100 % effluent

b.) NOEC Reproduction = 100 % effluent

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TABLE 1 (SHEET 3 OF 4)

## BIOMONITORING REPORTING FORM

*PIMEPHALES PROMELAS* SURVIVAL AND GROWTH

Dates and Times Composites Collected			DATE	TIME		DATE	TIME
			FROM:			TO:	
	No. 1	FROM:	10/17/99	0830	TO:	10/18/99	0815
	No. 2	FROM:	10/19/99	0745	TO:	10/20/99	0823
	No. 3	FROM:	10/21/99	0825	TO:	10/22/99	0845

Test initiated: 1545 10/19/99 dateDilution water used: Receiving water X Synthetic Dilution water

## FATHEAD MINNOW GROWTH DATA

Effluent Concentration (%)	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%	0.4260	0.4310	0.4520	0.3980	0.4160	0.4246	4.67
32%	0.4470	0.3650	0.4530	0.4410	0.4370	0.4286	8.41
42%	0.3950	0.4560	0.4490	0.4380	0.4410	0.4358	5.48
56%	0.4290	0.4380	0.4560	0.4490	0.3720	0.4288	7.79
75%	0.4520	0.4270	0.4390	0.3810	0.4460	0.4290	6.62
100%	0.4470	0.4520	0.3950	0.3990	0.4260	0.4238	6.22

\* coefficient of variation = standard deviation x 100/mean

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean dry weight (growth) at 7 days significantly less ( $p=0.05$ ) than the control's dry weight (growth) for the % effluent corresponding to (significant nonlethal effects):

a.) LOW FLOW OR CRITICAL DILUTION ( 100% )

X NO

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WATER QUALITY PERMITS  
APPLICATIONS TEAM

Prepared by:



Huther &amp; Associates

TABLE 1 (SHEET 4 OF 4)

## BIOMONITORING REPORTING FORM

## PIMEPHALES PROMELAS SURVIVAL AND GROWTH

## FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration (%)	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00
32%	100.0	75.0	100.0	100.0	100.0	100.0	100.0	95.0	11.77
42%	87.5	100.0	100.0	100.0	100.0	100.0	100.0	97.5	5.73
56%	100.0	100.0	100.0	100.0	87.5	100.0	100.0	97.5	5.73
75%	100.0	100.0	100.0	87.5	100.0	100.0	100.0	97.5	5.73
100%	100.0	100.0	87.5	87.5	87.5	100.0	100.0	92.5	7.40

\* coefficient of variation = standard deviation x 100/mean

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7 days significantly less ( $p=0.05$ ) than the control survival for the % effluent corresponding to:

a.) LOW FLOW OR CRITICAL DILUTION ( 100 % )            YES   X   NO

3. Enter percent effluent corresponding to each NOEC (no observed effect concentration) below and circle the lowest number:

a.) NOEC Survival =   100   % effluent

b.) NOEC Growth =   100   % effluent

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WASHINGTON PERMITS  
APPLICATIONS TEAM

Prepared by: James Luther

Huther & Associates



Applicant \_\_\_\_\_

TNRCC, NPDES, and/or TPDES Permit Number \_\_\_\_\_

Outfall \_\_\_\_\_

TABLE D-1 (SHEET 1 OF 2)

DAPHNIA PULEX SURVIVAL

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN*						

1. Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (Daphnia or Ceriodaphnia) = \_\_\_\_\_ % effluent  
(circle appropriate genus)

95% confidence limits: \_\_\_\_\_

Method of LC50 calculation: \_\_\_\_\_

If 24-hour survivorship data from the chronic Ceriodaphnia dubia test is being used, the mean survival per dilution for all 10 replicates shall be reported on this row.

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TNRCC, NPDES, and/or TPDES Permit Number \_\_\_\_\_

Outfall \_\_\_\_\_

TABLE D-1 (SHEET 2 OF 2)

FATHEAD MINNOW SURVIVAL  
(Pimephales promelas)

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

1. Enter percent effluent corresponding to the LC50 below:  
24 hour LC50 (Pimephales) = \_\_\_\_\_ % effluent  
95% confidence limits: \_\_\_\_\_  
Method of LC50 calculation: \_\_\_\_\_

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TNRCC, NPDES, and/or TPDES Permit Number \_\_\_\_\_

Outfall \_\_\_\_\_

TABLE D-2 (SHEET 1 OF 2)

Mysidopsis bahia SURVIVAL

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	5%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

1. Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (Mysidopsis) = \_\_\_\_\_ % effluent

95% confidence limits: \_\_\_\_\_

Method of LC50 calculation: \_\_\_\_\_

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COORDINATIONS TEAM

Applicant \_\_\_\_\_

TNRCC, NPDES, and/or TPDES Permit Number \_\_\_\_\_

Outfall \_\_\_\_\_

TABLE D-2 (SHEET 2 OF 2)

INLAND SILVERSIDE MINNOW SURVIVAL  
(Menidia beryllina)

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

1. Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (Menidia) = \_\_\_\_\_ % effluent

95% confidence limits: \_\_\_\_\_

Method of LC50 calculation: \_\_\_\_\_

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## RECEIVING WATERS

## SECTION 1

OUTFALL NUMBER(S) 001,101,002,003

The following questions refer to the immediate receiving water (e.g., a drainage ditch, a stream, a lake, a bay, etc.). Check the box which best describes the first receiving water into which the discharge will flow after it leaves the outfall and answer any associated questions.

4. The receiving water can best be described as:

a. ☐ Open Bay: Name \_\_\_\_\_

b. ☐ Tidal Stream, Bayou, or Marsh: Name \_\_\_\_\_

c. ☒ Lake or Pond: Name Welsh Reservoir

(1) Surface area 1365 acres

(2) Average depth of the entire water body 10 feet

(3) Approximate average depth of water body within a 500 foot radius of the discharge point 10 feet

d. ☐ Stream OR ☐ Man-made Channel or Ditch:

Name/Number N/A

(1) Stream or Channel Type: Characterize the area upstream of the discharge by checking one of the boxes below. (For a new discharge, characterize downstream area.) N/A

(a) ☐ Intermittent (dry for at least one week during most years)

(b) ☐ Intermittent with Persistent Pools (enduring pools containing sufficient habitat to maintain significant aquatic life uses)

(c) ☐ Perennial (normally flowing)

(2) Characterize the stream channel modifications (check as appropriate):

N/A  
☐ channelized ☐ dammed ☐ banks rip-rapped  
☐ leveed ☐ concrete lined ☐ others, specify:

(3) List the name(s) of any perennial streams which join the receiving water within three miles downstream of the discharge point:

N/A

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- (4) Do the receiving water characteristics change within three miles downstream of the discharge? (e.g., natural or man-made dams, ponds, reservoirs, etc.)

YES \_\_\_\_\_ NO \_\_\_\_\_. If YES, state how:

N/A

- (5) Basis of flow assessment (for answer to item d(1): ☐ USGS flow records, ☐ personal observation, ☐ historical observation of adjacent landowner(s), ☐ other, specify

N/A

- (6) General observations of water body during normal dry weather conditions:

Date and time of observation: \_\_\_\_\_

Was water body influenced by storm water runoff during observations?

N/A

e. ☐ Freshwater Swamp or Marsh: Name N/A

f. ☐ Other, Specify N/A

5. General Characteristics of Water Body:

- a. Is the receiving water upstream of the discharge or proposed discharge site influenced by (check as appropriate):

<input type="checkbox"/> oil field activities	<input type="checkbox"/> urban runoff
<input checked="" type="checkbox"/> agricultural runoff	<input type="checkbox"/> septic tanks
<input type="checkbox"/> upstream discharges	<input type="checkbox"/> others, specify:

- b. Uses of water body (observed or evidences of) (Check as appropriate):

<input type="checkbox"/> livestock watering	<input checked="" type="checkbox"/> contact recreation
<input checked="" type="checkbox"/> non contact recreation	<input checked="" type="checkbox"/> fishing
<input type="checkbox"/> domestic water supply	<input checked="" type="checkbox"/> industrial water supply
<input type="checkbox"/> irrigation withdrawal	<input type="checkbox"/> navigation
<input type="checkbox"/> picnic or park activities	
<input type="checkbox"/> others, specify:	

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c. Select one of the following to best describe the aesthetics of the receiving water and the surrounding area (check one):

- ☐ Wilderness: outstanding natural beauty; usually wooded or unpastured area; water clarity exceptional
- ☒ Natural Area: trees and/or native vegetation common; some development evident (from fields, pastures, dwellings); water clarity discolored
- ☐ Common Setting: not offensive, developed but uncluttered; water may be colored or turbid
- ☐ Offensive: stream does not enhance aesthetics; cluttered; highly developed; dumping areas; water discolored

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ATTACHMENT E

SECTION 2

N/A

SECTION 2 IS REQUIRED FOR INDUSTRIAL WASTEWATER PERMIT APPLICATIONS FOR  
NEW OUTFALLS AND FOR ALL EPA CLASSIFIED MAJOR FACILITIES

NOTE THAT SECTION 2 APPLIES ONLY TO PERENNIAL STREAMS AND INTERMITTENT STREAMS WITH PERSISTENT (PERENNIAL) POOLS AS IDENTIFIED IN SECTION 1, ITEM 4.d.(1). IF THE DISCHARGE IS DIRECTLY TO A CLASSIFIED SEGMENT AS DEFINED IN APPENDIX C OR TO A PARTIALLY CLASSIFIED WATER BODY AS DEFINED IN APPENDIX D OF THE TEXAS SURFACE WATER QUALITY STANDARDS (30 TAC 307.10), THEN IT IS NOT NECESSARY TO COMPLETE SECTION 2. IF THE INFORMATION REQUIRED IN THIS SECTION HAS BEEN PROVIDED IN A PREVIOUS APPLICATION, PLEASE RESUBMIT THE INFORMATION.

DETERMINATION OF PHYSICAL CHARACTERISTICS OF A WATER BODY

Use the "Stream Physical Characteristics Worksheet," SECTION B (PART I), to record the required data. Summarize and average the data from the worksheets and complete SECTION B (PART II), Physical Characteristics of Water Body. On an attached USGS Quadrangle map locate the existing or proposed discharge point(s) and locations of transect measurements.

Definitions of technical terms follow this discussion.

CONDUCT THE PHYSICAL ASSESSMENT DOWNSTREAM OF THE PROPOSED OR EXISTING OUTFALL. Use the attached "Stream Physical Characteristics Worksheet," SECTION B (PART I), to summarize measurements. The worksheet is divided into two portions. The upper portion is for general observations made over the entire reach, while the lower or boxed portions are for measurements and observations made at specific transect locations.

Transect measurements are usually made beginning at the point of outfall and continuing downstream. Once these are completed general observations are made over the reach while returning to the point of outfall.

Observe or measure stream widths at a minimum of four and a maximum of ten equally spaced locations over a 0.5 mile reach. The number of transects made depends upon width variability. At each point where width measurements are made, also measure the water depth at 4-10 points across the transect. Include transects within each habitat type (pool, riffle, run, glide) if they exist. If pools are present, include measurements across the deepest area.

Characterize each transect site as riffle, run, glide or pool.

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After finishing the transect measurements, complete the general observation portion of the worksheet. Count the number of stream bends and determine their definition (well, moderate, poor.) Count the number of riffles and estimate the magnitude of flow fluctuations. Look for evidence of debris in bank trees or its position on stream banks (upper, middle, lower.) Another indication is how well stream flow covers the channel. If water has receded from banks exposing bottom substrates, fluctuations may be severe. The best source of evidence is historical USGS stream flow records, if available. Indicate observed channel obstructions (fences, log jams, culverts, low water bridges, etc.) and channel modifications (channelized, cleared, leveed, concrete lined, rip-rapping, etc.).

At an appropriate location within the stream reach, measure stream flow. IT IS VERY IMPORTANT TO IDENTIFY THE FLOW MEASUREMENT METHOD.

#### DEFINITIONS

Glide - Portion of the water column that resembles flow that would be found in a shallow canal. Water surface gradient over a glide is nearly zero, so velocity is slow, but flow is shore to shore without eddy development.

Pool - An area of the water column that has slow velocity and is deeper than a riffle, run, or glide. The water surface gradient of pools is very close to zero and their channel profile is usually concave. Pools often have eddies with varying directions of flow.

Riffle - Portion of water column that is usually constricted where water velocity is fast due to a change in surface gradient. Stream depth is generally shallow and the channel profile is usually straight to convex. Surface flow through riffles usually ripples due to constriction, shallowness, and presence of irregular bottom substrates.

Run - Portion of the water column that has rapid nonturbulent shore to shore flow. A run is too deep to be a riffle and flow is too fast to be a pool. The channel profile under a run is usually a uniform flat plane.

Stream Bend - Curved part of a stream. A well defined bend has a deep outside area and shallow inside area accentuated by point bar development. Due to sharp bending, stream flow is forced to the outside and eddies develop on the inside of the bend. A moderately developed bend forces some flow to the outside and has only a slight change in depth across the channel. A poorly defined bend has no noticeable change in water depth across the channel, and stream flow is generally not forced to one side.

Stream Depth - The vertical height of the water column from the existing water surface level to the channel bottom.

Stream Width - The horizontal distance along the transect line from shore to shore along the existing water surface.

Transect Line - A straight line, perpendicular to stream flow, between two points on opposite stream banks.

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# ATTACHMENT E

## SECTION 2 (Part I) - Stream Physical Characteristics Worksheet

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Stream name: \_\_\_\_\_

Location: \_\_\_\_\_

Type of stream upstream of existing discharges or downstream of proposed discharges:

(Check one) ☐ perennial ☐ intermittent with persistent pools

THE FOLLOWING INFORMATION IS TO BE PROVIDED FOR THE  
STREAM DOWNSTREAM OF EXISTING OR PROPOSED DISCHARGES

No. of stream bends: well defined \_\_\_\_\_  
moderately defined \_\_\_\_\_  
poorly defined \_\_\_\_\_

No. of riffles \_\_\_\_\_

Flow fluctuations (check one): ☐ minor; ☐ moderate; ☐ severe

Evidence of flow fluctuations \_\_\_\_\_

Observed stream uses \_\_\_\_\_

Channel obstructions/modifications \_\_\_\_\_

Stream Type at Transect Location: riffle ☐, run ☐, glide ☐, pool ☐ (check one)

Location of Transect	Water Surface Width (ft)	Stream Depths (ft) at Points Across Transect (channel bed to water surface)									

Stream Type at Transect Location: riffle ☐, run ☐, glide ☐, pool ☐ (check one)

Location of Transect	Water Surface Width (ft)	Stream Depths (ft) at Points Across Transect (channel bed to water surface)									

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Stream Type at Transect Location: riffle ☐, run ☐, glide ☐, pool ☐ (check one)

Location of Transect	Water Surface Width (ft)	Stream Depths (ft) at Points Across Transect (channel bed to water surface)									

Stream Type at Transect Location: riffle ☐, run ☐, glide ☐, pool ☐ (check one)

Location of Transect	Water Surface Width (ft)	Stream Depths (ft) at Points Across Transect (channel bed to water surface)									

Stream Type at Transect Location: riffle ☐, run ☐, glide ☐, pool ☐ (check one)

Location of Transect	Water Surface Width (ft)	Stream Depths (ft) at Points Across Transect (channel bed to water surface)									

Stream Type at Transect Location: riffle ☐, run ☐, glide ☐, pool ☐ (check one)

Location of Transect	Water Surface Width (ft)	Stream Depths (ft) at Points Across Transect (channel bed to water surface)									

Stream Type at Transect Location: riffle ☐, run ☐, glide ☐, pool ☐ (check one)

Location of Transect	Water Surface Width (ft)	Stream Depths (ft) at Points Across Transect (channel bed to water surface)									

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APPLICATIONS TEAM

ATTACHMENT E

SECTION B (PART II) - Physical Characteristics of Water Body

Streambed slope of entire reach (from USGS map in ft./ft.) \_\_\_\_\_

Approximate drainage area above the most downstream  
transect (from USGS map or county highway map in mi<sup>2</sup>) \_\_\_\_\_

Length of stream evaluated (in feet) \_\_\_\_\_

Number of lateral transects made \_\_\_\_\_

Average stream width (in feet) \_\_\_\_\_

Average stream depth (in feet) \_\_\_\_\_

Instantaneous stream flow (in ft<sup>3</sup>/sec) \_\_\_\_\_

Indicate flow measurement method  
(VERY IMPORTANT - type of meter, floating chip timed  
over a fixed distance, etc.) \_\_\_\_\_

Flow fluctuations (minor, moderate, severe) \_\_\_\_\_

Size of pools (large, small, moderate, none) \_\_\_\_\_

Maximum pool depth (in feet) \_\_\_\_\_

Total number of stream bends \_\_\_\_\_

    Number well defined \_\_\_\_\_

    Number moderately defined \_\_\_\_\_

    Number poorly defined \_\_\_\_\_

Total number of riffles \_\_\_\_\_

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ATTACHMENT F

SEWAGE SLUDGE MANAGEMENT AND DISPOSAL

N/A

This attachment is for the management and final disposal of sewage sludge from your facility. Please answer all questions and provide all the information required.

Under some circumstances (as directed in this attachment), you may be required to submit the SEWAGE SLUDGE TECHNICAL REPORT as a supplement to this application. Please refer to the APPLICATION INSTRUCTIONS FOR WASTEWATER/SLUDGE PERMIT for methods of obtaining the SEWAGE SLUDGE TECHNICAL REPORT.

Is this a new permit application or an amendment permit application?  
YES \_\_\_\_\_ NO \_\_\_\_\_ If YES, complete item 1.

Is this an application (new, amendment or renewal) for a facility discharging into the Lake Houston Watershed?  
YES \_\_\_\_\_ NO \_\_\_\_\_ If YES, complete item 1.

Note that all permit applications for facilities that discharge to Segment Nos. 1002, 1003, 1004, 1008, 1009, 1010, 1011, and 1015 are required to complete item 1. The Lake Houston Watershed is defined in 30 TAC Section 311.31 as the entire drainage area of Lake Houston, with the exception of that portion of the drainage basin of the West Fork of the San Jacinto River which lies upstream of the Lake Conroe Dam.

1. SLUDGE MANAGEMENT AND DISPOSAL

Provide a solids management plan that includes:

- a. The dimensions and capacities of all sewage sludge handling and treatment units and processes.
- b. Calculations showing the amount of solids generated at design flow and at 75 percent, 50 percent and 25 percent of design flow.
- c. Operating range for mixed liquor suspended solids in the treatment process based on the projected actual and design flow expected at the facility.
- d. A description of the procedure and method of solids removal from both the wastewater and sludge treatment processes.
- e. Quantity of solids to be removed from the process and schedule for removal of solids that is designed to maintain an appropriate solids inventory.
- f. Identification and ownership of the ultimate disposal site and a system of documenting the amount of solids disposed of in dry weight form.
- g. If the treatment system utilizes facultative lagoons, provide calculations describing the design life of the sludge holding volume of the ponds. Provide the location and depth of any monitoring wells located in the area of and adjacent to the facultative lagoons. Describe how the sludge will ultimately be disposed of upon reaching this design life.

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ITEMS 2 THRU 9 ARE REQUIRED FOR ALL (NEW, AMENDMENT, AND RENEWAL) PERMIT APPLICATIONS.

N/A

2. Is sewage sludge disposed of at a TNRCC Permitted co-disposal landfill?  
YES \_\_\_\_\_ NO \_\_\_\_\_ If YES, complete the following:

a. Site name and TNRCC permit number:

b. Owner/operator: \_\_\_\_\_

c. Location (include county): \_\_\_\_\_

d. Transported by (truck, train, pipe, other): \_\_\_\_\_

e. If hauled by motorized vehicle, name and TNRCC registration number of hauler: \_\_\_\_\_

f. Method of sludge dewatering (drying beds, etc.) for landfilling and average percent solids of landfilled sludge: \_\_\_\_\_

3. Is sewage sludge transported to another plant for further treatment and disposal?  
YES \_\_\_\_\_ NO \_\_\_\_\_ If YES, complete the following:

a. Plant to receive sludge, name and TNRCC Permit No: \_\_\_\_\_

b. Transported by (truck, pipe, etc.): \_\_\_\_\_

If hauled by motorized vehicle, provide Transporter's TNRCC Registration number: \_\_\_\_\_

c. Attach a written statement or a copy of contractual agreements confirming that the plant identified above will accept and be responsible for the sludge from the plant for the life of the permit (at least five years).

4. Are you requesting to continue the current authorization in your existing permit to beneficially land apply sewage sludge at this site or a site under your direct control?  
YES \_\_\_\_\_ NO \_\_\_\_\_

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WASTEWATER PERMITS

N/A

Are you requesting a new authorization to beneficially land apply sewage sludge at this site or a site under your direct control?  
YES \_\_\_\_\_ NO \_\_\_\_\_

If YES to either question, provide the information required in the SEWAGE SLUDGE TECHNICAL REPORT.

If NO to both questions and your sewage sludge is beneficially land applied, provide the following information:

a. \_\_\_\_\_ Reclamation; \_\_\_\_\_ Soil Conditioning;

b. Transported by: \_\_\_\_\_

Transporter's TNRCC Registration Number: \_\_\_\_\_

c. Transported in: \_\_\_\_\_ liquid \_\_\_\_\_ semi-liquid  
\_\_\_\_\_ semi-solid \_\_\_\_\_ solid state

d. Location of disposal site (include county) and name of owner:  
\_\_\_\_\_

e. Site name and TNRCC Registration Number:  
\_\_\_\_\_

5. a. Are you currently authorized in your existing permit to utilize composting of sewage sludge at this site or for a site under your control?  
YES \_\_\_\_\_ NO \_\_\_\_\_ If YES, provide the following:

(1) Date operation commenced: \_\_\_\_\_

(2) Location of operation: \_\_\_\_\_

(3) Type of bulking agent: \_\_\_\_\_

(4) Approximate amount of sludge composted: \_\_\_\_\_

(5) A brief description of composting process: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(6) Identify any significant changes in composting process since the last permit issuance: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- b. Are you requesting authorization to compost sewage sludge?  
YES \_\_\_\_\_ NO \_\_\_\_\_ If YES, provide the information required in the SEWAGE SLUDGE TECHNICAL REPORT.

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APPROPRIATE PERMITS



N/A

6. a. Are you currently authorized in your existing permit to utilize marketing and distribution of sewage sludge at this site or for a site under your control? YES \_\_\_\_\_ NO \_\_\_\_\_

If YES and you received authorization prior to August 19, 1993, provide the information required in the SEWAGE SLUDGE TECHNICAL REPORT.

If YES and you received authorization after August 19, 1993, or your sewage sludge is marketed and distributed by someone else provide the following information:

- (1) TNRCC permit number: \_\_\_\_\_
- (2) Site used for distribution storage center: \_\_\_\_\_
- (3) Type of storage: \_\_\_\_\_
- (4) Type of treatment: \_\_\_\_\_
- (5) Type of record keeping: \_\_\_\_\_

- b. Are you requesting authorization to market and distribute sewage sludge at this facility or a facility under your direct control?  
YES \_\_\_\_\_ NO \_\_\_\_\_ If YES, provide the information required in the SEWAGE SLUDGE TECHNICAL REPORT.

7. a. Are you currently authorized in your existing permit to utilize surface disposal of sewage sludge at this site or a site under your direct control?  
YES \_\_\_\_\_ NO \_\_\_\_\_

If YES and you received authorization prior to August 19, 1993 provide the information required in the SEWAGE SLUDGE TECHNICAL REPORT.

If YES and you received authorization after August 19, 1993, provide the following information:

- (1) Site name and TNRCC permit number: \_\_\_\_\_
- (2) Owner/operator: \_\_\_\_\_
- (3) Location: \_\_\_\_\_
- (4) Transported by (truck, train, pipe, other): \_\_\_\_\_
- (5) If hauled by motorized vehicle, name and TNRCC Registration Number of transporter: \_\_\_\_\_
- (6) Method of sludge dewatering (drying beds, etc.) for landfilling and average percent solids of landfilled sludge: \_\_\_\_\_
- (7) Describe the type of landfill (e.g., trench, aerial) \_\_\_\_\_

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WASTE MANAGEMENT  
APPLICATIONS TEAM

N/A

- b. Are you requesting authorization to surface dispose sewage sludge at this site or site under your direct control?  
YES \_\_\_\_\_ NO \_\_\_\_\_ If YES, provide the information required in the SEWAGE SLUDGE TECHNICAL REPORT.
8. Are you currently authorized in your existing permit or are you seeking authorization to utilize sludge lagoons on property owned and/or under your direct control?  
YES \_\_\_\_\_ NO \_\_\_\_\_ If YES, provide the following information:
- a. Number of lagoons: \_\_\_\_\_
- b. Surface area of each lagoon: \_\_\_\_\_  
Average depth of each lagoon: \_\_\_\_\_
- c. Location: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- d. Pond lining or plans for lining: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- e. Depth to shallowest groundwater: \_\_\_\_\_  
Provide a profile of soil types encountered down to the groundwater table.
- f. Describe method to control extraneous surface water from entering site:  
\_\_\_\_\_  
\_\_\_\_\_
- g. Provide a closure plan for the site.
- h. If the site includes monitoring wells, provide information including location, depth of wells and monitoring results.

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APPLICATIONS TEAM

N/A

- i. Ultimate method for sludge disposal:

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- j. Provide a schedule for removal of solids. If storage time exceeds 2 years, justification for on-site storage will need to be provided. If storage time exceeds 5 years, complete the SEWAGE SLUDGE TECHNICAL REPORT.

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APPLICATIONS TEAM

ATTACHMENT G

INDUSTRIAL WASTE CONTRIBUTION

N/A

PUBLICLY OWNED TREATMENT WORKS (POTWs) that meet the following requirements must provide the industrial waste contribution information in this attachment:

1. Facilities with a design/permitted flow of 1.0 MGD or greater;
2. For facilities with multiple permit phases, facilities with an authorized or proposed phase with a design flow of 1.0 MGD or greater; or
3. Facilities that have or are required to have an approved pretreatment program.
4. Facilities that have or are requesting authorization to land apply sewage sludge for beneficial use in this permit.

Please note that (1) privately-owned facilities, and (2) POTWs with a design/permitted flow less than 1.0 MGD that do not have a pretreatment program, are not required to complete and submit this attachment:

DEFINITIONS

Industrial User (IU) - Any industrial or commercial entity that discharges wastewater to the treatment works that is not domestic wastewater. Domestic wastewater includes wastewater from connections to houses, hotels, non-industrial office buildings, institutions, or sanitary waste from industrial facilities. The number of IUs is the total number of industrial and commercial users that discharge to the treatment works.

Significant Industrial User (SIU) - An industrial user defined in 40 CFR Section 403.3(t) as follows:

- 1) subject to Categorical Pretreatment Standards under 40 CFR Section 403.6 and 40 CFR Chapter I, Subchapter N; and
- 2) any other industrial user that:
  - a) Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (excluding sanitary, noncontact cooling and boiler blowdown wastewater);
  - b) Contributes a process waste stream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment works; or,
  - c) Is designated as such by the Control Authority as defined in 40 CFR Section 403.12(a) on the basis that the industrial user has a reasonable potential for adversely affecting the treatment works operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR Section 403.8(f)(6)).

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REGULATIONS TEAM

Categorical Industrial User (CIU) - An industrial user that is subject to Categorical Pretreatment Standards under 40 CFR Section 403.6 and 40 CFR Chapter I, Subchapter N, which are technology-based standards developed by EPA setting industry-specific effluent limits. (A list of industrial categories subject to Categorical Pretreatment Standards is included in the APPLICATION INSTRUCTIONS FOR WASTEWATER/SLUDGE PERMIT.)

1. All Publicly Owned Treatment Works (POTWs) that accept process wastewater from any Significant Industrial User (SIU) must complete the following:

- a. Does your POTW have or is it required to develop an approved pretreatment program? YES \_\_\_\_\_ NO X

If YES, please note that following TPDES permit issuance, all POTWs with an approved pretreatment program, or a requirement to develop an approved pretreatment program, must provide a written technical evaluation of the need to modify the POTW's pretreatment program and revise their technically based local limits under 40 CFR Section 403.5(c)(1).

- b. If YES to item a, have there been any substantial modifications to the POTW's approved pretreatment program that have not been approved in accordance with 40 CFR Section 403.18? YES \_\_\_\_\_ NO \_\_\_\_\_

If YES to item a, identify, on a separate attachment, all substantial modifications that have not been approved.

- c. Number of Categorical Industrial Users (CIUs) and Significant Industrial Users (SIUs).

- (1) Provide the number of each of the following types of industrial users that discharge to your POTW.

Number of CIUs \_\_\_\_\_  
Number of non-categorical SIUs \_\_\_\_\_  
Number of other non-regulated IU's \_\_\_\_\_

- (2) Average Daily flow from Industrial Users. Estimate the total average daily wastewater flow from all industrial users.

CIUs only \_\_\_\_\_ MGD  
Noncategorical SIUs only \_\_\_\_\_ MGD  
Total average daily flow \_\_\_\_\_ MGD

- d. In the past three years, has your POTW experienced treatment plant upset or interference as defined in 40 CFR Part 403?  
YES \_\_\_\_\_ NO \_\_\_\_\_

If YES, on a separate attachment, identify all dates, duration, description of upset, probable cause(s) and possible source(s).

- e. In the past three years, has your POTW experienced pass through as defined in 40 CFR Part 403?  
YES \_\_\_\_\_ NO \_\_\_\_\_

If YES, on a separate attachment, identify all dates, duration, description of pollutants passing through the treatment plant, probable cause(s) and possible source(s).

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2. If your POTW has an approved pretreatment program, please list any and all parameters measured above the MAL in your POTW's effluent during the past three years annual monitoring scan according to the requirements in the pretreatment section of your TPDES permit.

<u>Pollutant</u>	<u>Concentration</u>	<u>MAL</u>	<u>Units</u>	<u>Date</u>
	N/A			

If retests were done subsequent to the above annual testing for any parameters identified in your POTW's effluent above the MAL, please identify all retest parameters, concentrations, MALs and dates. Attach additional sheets as necessary.

POTWs THAT DO NOT HAVE AN APPROVED PRETREATMENT PROGRAM ARE REQUIRED TO PROVIDE THE INFORMATION IN THE FOLLOWING ITEM NO. 3. (POTWs that have an approved pretreatment program do not need to complete item 3.)

Significant Industrial User Information

- a) Provide the name and mailing address of each SIU.
- b) Describe the actual process(es) (rather than simply listing them) at the SIU that affect or contribute to the SIU's discharge. For example, in describing a metal finishing operation, include such information as how the product is cleaned prior to finishing, what type of plating baths are in operation (e.g., nickel, chromium), how paint is applied, and how the product is polished. Attach additional sheets if necessary.
- c) List principal products that the SIU generates, the raw materials and the rate at which those raw materials are used to manufacture the products.
- d) Flow rate. Process wastewater means any water that, during manufacturing or processing, comes in direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. Indicate the average daily volume, in gallons per day, of process wastewater and non-process wastewater that the SIU discharges into the collection system. Specify whether discharges are continuous or batch (non-continuous).
- e) Indicate whether the SIU is subject to technically based local limits (TBLs) and/or categorical pretreatment standards. Technically based local limits are enforceable local requirements developed by treatment works to address federal standards as well as state and local regulations and requirements. Categorical Pretreatment Standards are national technology-based standards developed by EPA, setting industry-specific effluent limits. These standards are implemented by 40 CFR Parts 403-471.
- f) Provide information concerning any problems the treatment works has experienced that are attributable to discharges from the SIUs. Problems may include upsets, interferences or pass through at the plant, corrosion in the collection system, or other similar events.

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WATER PERMITS  
APPLICATIONS TEAM

3. Significant Industrial User (SIU) Information. Provide the name, address and requested information of each SIU, as defined in 40 CFR Part 403, discharging to your POTW. (Submit additional pages as necessary.)

a. Name: \_\_\_\_\_

Mailing address: \_\_\_\_\_

b. Industrial processes that affect or contribute to the SIU's discharge:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

c. Principal product(s): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Raw materials annual usage \_\_\_\_\_

d. Flow rate information: Indicate the current daily average volume discharged into the POTW collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent (batch discharge).

Process wastewater flow rate:

\_\_\_\_\_ gpd (\_\_\_\_\_ Continuous or \_\_\_\_\_ Batch frequency)

Non-process wastewater flow rate:

\_\_\_\_\_ gpd (\_\_\_\_\_ Continuous or \_\_\_\_\_ Intermittent)

e. Pretreatment Standards: Indicate whether the SIU is subject to the following:

Technically based local limits: YES \_\_\_\_\_ NO \_\_\_\_\_

Categorical pretreatment standards: YES \_\_\_\_\_ NO \_\_\_\_\_

If subject to categorical pretreatment standards, which category and subcategory?

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APPLICATIONS TEAM

<u>Category(ies)</u>	<u>Subcategory(ies)</u>		
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

f. Problems at the POTW attributed to the waste discharged by the SIU:  
 Has the SIU caused or contributed to any problems (e.g., upsets, interferences, pass through) at your POTW in the past three years?  
 YES \_\_\_\_\_ NO \_\_\_\_\_

If YES, describe each episode, including dates, duration, description of problems, probable pollutants, etc. on a separate attachment.

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 APPLICATIONS TEAM



# ATTACHMENT H

## HAZARDOUS SUBSTANCES REQUIRED TO BE IDENTIFIED IF EXPECTED TO BE PRESENT

Attachment H is a list of hazardous substances which are required to be identified by the applicant if expected to be present in any wastewater discharged or disposed of via this permit. Please check all substances listed below which are expected to be present in the effluent. If none of the substances listed below are expected to be present then please check the following statement to verify that all of the hazardous substances listed in Attachment H have been reviewed.

  X   All of the hazardous substances and toxic pollutants listed in Attachment H have been reviewed for possible presence in the effluent discharged/disposed of via the proposed permit.

### Toxic Pollutant

       Asbestos

### Hazardous Substances

<u>      </u> Acetaldehyde	<u>      </u> Kepone
<u>      </u> Allyl alcohol	<u>      </u> Mercaptodimethur
<u>      </u> Allyl chloride	<u>      </u> Methyl mercaptan
<u>      </u> Amyl acetate	<u>      </u> Methyl methacrylate
<u>      </u> Anilin	<u>      </u> Mevinphos
<u>      </u> Benzonitrile	<u>      </u> Mexacarbate
<u>      </u> Benzyl chloride	<u>      </u> Monoethylamine
<u>      </u> Butyl acetate	<u>      </u> Monomethylamine
<u>      </u> Butylamine	<u>      </u> Naled
<u>      </u> Carbofuran	<u>      </u> Naphthenic acid
<u>      </u> Carbon disulfide	<u>      </u> Nitrotoluene
<u>      </u> Coumaphos	<u>      </u> Phenolsulfonate
<u>      </u> Cresol	<u>      </u> Phosgene
<u>      </u> Crotonaldehyde	<u>      </u> Propargite
<u>      </u> Cyclohexane	<u>      </u> Propylene oxide
<u>      </u> Dicamba	<u>      </u> Pyrethrins
<u>      </u> Dichlobenil	<u>      </u> Quinoline
<u>      </u> Dichlone	<u>      </u> Resorcinol
<u>      </u> 2,2-Dichloropropionic acid	<u>      </u> Strontium
<u>      </u> Dichlorvos	<u>      </u> Strychnine
<u>      </u> Diethylamine	<u>      </u> Styrene
<u>      </u> Dimethylamine	<u>      </u> 2,4,5-T
<u>      </u> Dinitrobenzene	<u>      </u> (2,4,5 Trichlorophenoxyacetic acid)
<u>      </u> Diquat	<u>      </u> TDE
<u>      </u> Disulfoton	<u>      </u> (Tetrachlorodiphenylethane)
<u>      </u> Diuron	<u>      </u> Trichlorofan
<u>      </u> Epichlorohydrin	<u>      </u> Triethylamine
<u>      </u> Ethion	<u>      </u> Trimethylamine
<u>      </u> Ethylene diamine	<u>      </u> Uranium
<u>      </u> Formaldehyde	<u>      </u> Vanadium
<u>      </u> Furfural	<u>      </u> Vinyl acetate
<u>      </u> Isoprene	<u>      </u> Xylene
<u>      </u> Isopropanolamine	<u>      </u> Xylenol
	<u>      </u> Zirconium

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APPLICATIONS SECTION

ATTACHMENT I

POLLUTION PREVENTION

This attachment is intended to gather information on your facility's efforts for pollution prevention. Please answer all questions of this attachment and provide all the information required with your application.

1. Have you instituted or continued programs directed toward pollution prevention (P2), especially to incorporate water conservation, source reduction, waste minimization, and/or recycling?

YES   X   NO           

If YES, provide a brief summary of the program(s) that incorporate water conservation, source reduction, waste minimization, recycling, and/or any other elements that are similar to the suggestions above. PLEASE DO NOT SUBMIT DETAILED PLANS OR REPORTS WITH THIS APPLICATION.

Waste minimization, and recycling

2. Have you collected and compiled reliable data to record trends of actual reductions of pollutants in either pounds per day or percent reductions?  
YES            NO   X

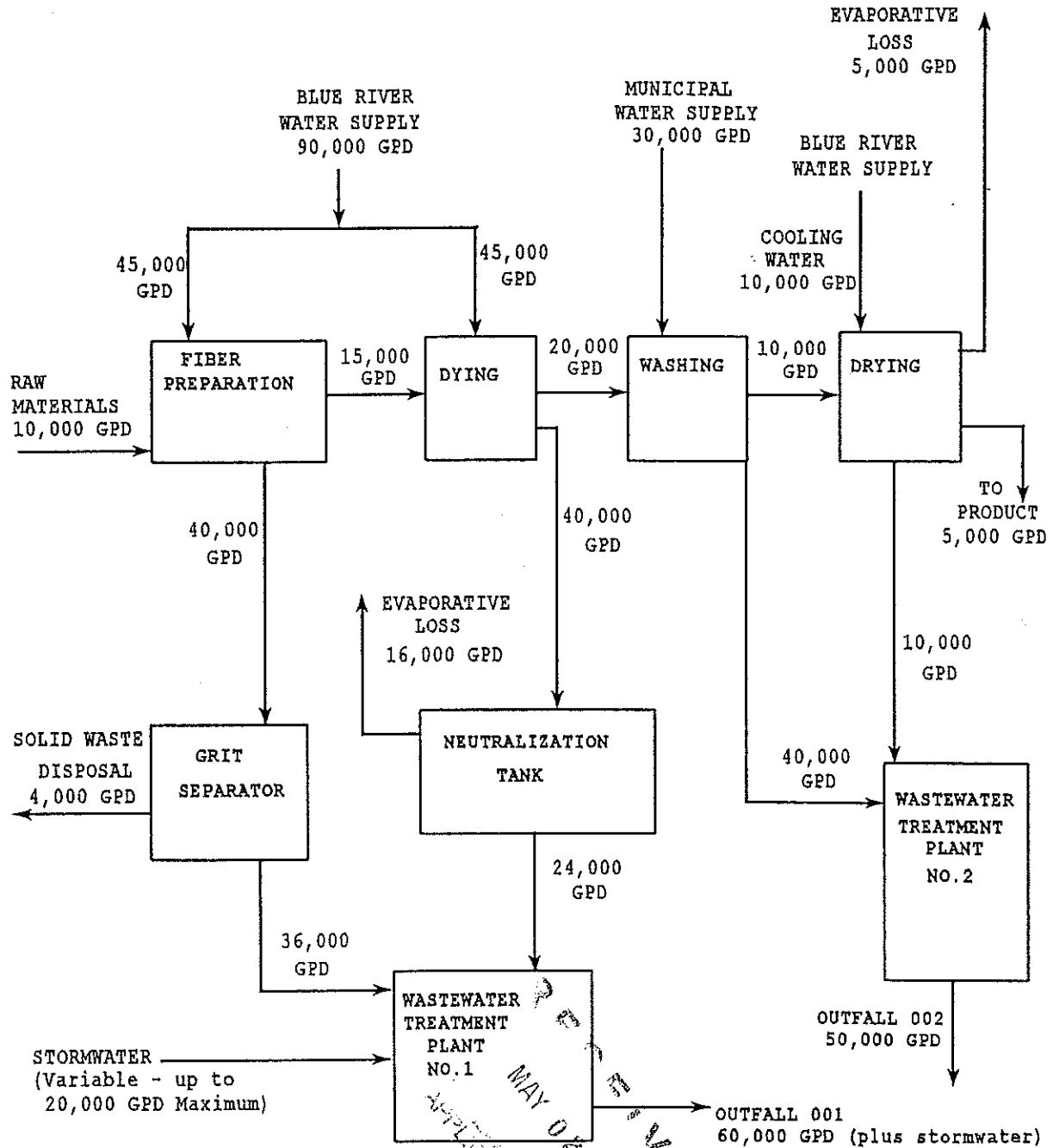
If YES, provide a brief summary of the actual or percent reductions. PLEASE DO NOT SUBMIT DETAILED PLANS OR REPORTS WITH THIS APPLICATION.

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APPLICATIONS SECTION

3. The TNRCC encourages facilities to develop and implement new pollution prevention programs or modify existing pollution prevention programs for your facility. Following are some components that may be considered when developing a pollution prevention program. PLEASE DO NOT SUBMIT ANY RESPONSE FOR THIS ITEM, THIS IS PROVIDED IN THE APPLICATION FOR INFORMATIONAL PURPOSES ONLY.
- a. Develop a Pollution Prevention Mission Statement, incorporating economic growth and ensuring environmental protection of your watershed.
  - b. Develop Your Industry's Policy Statements on Pollution Prevention.
    - (1) Promote Water Conservation, Source Reduction, Waste Minimization and Recycling.
    - (2) Apply policy statements to any and all departments and processes of your industry.
  - c. Incorporate P2 plans and best management practices as part of industrial process and wastewater plant designs.
  - d. Learn about Pollution Prevention Opportunities for Your Specific Industry.
    - (1) Research potential areas where P2 may be incorporated into your industry's processes and operations through a P2 self-assessment.
    - (2) Provide P2 information, contact persons and telephone numbers to your management and other similar industries.
    - (3) Use the internet as a resource.
  - e. Serve as a Role Model.
    - (1) Coordinate recycling efforts with the city government and between industries.
    - (2) Arrange an industrial user mentor program.
    - (3) Provide meeting facilities for other industries in your watershed and other industry groups.
  - f. Use the Media and Local Resources.
    - (1) Request local universities provide technical expertise.
    - (2) Send public service announcements to newspapers, radio, and local television stations to communicate your industry's purpose in P2 activities, meeting times and locations.
    - (3) Ensure the success of your programs by involving your community, including other industry organizations and asking for feedback.
  - g. Educate Your Industry and Community.
    - (1) Train staff (including management) and introduce P2 principles and activities during the process operations and wastewater treatment plant.
    - (2) Request that industry leaders influence and support P2 curriculum and terminology taught at all levels in community schools and universities.
  - h. Establish Reliable Data
    - (1) Collect and compile reliable data to record trends of actual reductions of pollutants in either pounds per day or percent reductions.
    - (2) Develop, implement, and track the success of your organization's P2 plan as an example for other industries.

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INDUSTRIAL WASTEWATER PERMIT APPLICATIONS SECTION

ATTACHMENT J  
SCHEMATIC OF WASTEWATER FLOWS  
EXAMPLE



- i. Evaluate Why Pollution Prevention is Important to Your Industry.
  - (1) Knowing that water is a limited resource, establish rationale for your industry to save water.
  - (2) Prepare for Total Maximum Daily Loads (TMDLs) that may be developed in your watershed - TMDLs define the limits to what a watershed can receive.
  - (3) Assist other industries in your watershed to encourage them to reduce pollutant contributions.
- j. Optimize the efficiency and extending the useful life of the wastewater plant. The following items should be considered:
  - (1) The influent loadings, flow and design capacity.
  - (2) The effluent quality and wastewater plant performance.
  - (3) The age and expected life of the wastewater plant's equipment.
  - (4) Bypasses and overflows of the wastewater plant.
  - (5) New developments at the facility.
  - (6) Training plans and status.
  - (7) The financial status of the facility.
  - (8) Preventative maintenance programs and equipment condition.
  - (9) An overall evaluation of conditions at the facility.

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## ATTACHMENT K

### STORM WATER PERMITTING

This attachment is intended to provide information concerning which conditions require individual TPDES permits for storm water discharges. For more detailed information, please refer to 40 CFR Part 122.

1. Dischargers of "storm water associated with industrial activity," as defined in 40 CFR Part 122.26, are required to apply for an individual permit or seek coverage under a promulgated storm water general permit.
2. Storm water discharge associated with industrial activity - means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 CFR part 122.
  - a. For the categories of industries identified in subitems (d)(1) through (10) below, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR part 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.
  - b. For the categories of industries identified in subitem (d)(11) below, the term includes only storm water discharges from all the areas (except access roads and rail lines) that are listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water.
  - c. For the purposes of this definition, material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas.

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d. The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this definition:

- (1) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR subchapter N (except facilities with toxic pollutant effluent standards which are exempted under subitem (d)(11) below.
- (2) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283), 29, 311, 32 (except 323), 33, 3441, 373.
- (3) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 CFR 434.11(1) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; (inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator; inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, nor sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim).
- (4) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under subtitle C of RCRA.
- (5) Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under subtitle D of RCRA;
- (6) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093.
- (7) Steam electric power generating facilities, including coal handling sites.

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- (8) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under subitems (d)(1)-(7) or (9)-(1) of this item are associated with industrial activity.
- (9) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR part 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with section 405 of the CWA.
- (10) Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than five acres of total land area which are not part of a larger common plan of development or sale.
- (11) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25, [and which are not otherwise included within subitems (2)-(10) above].

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**ATTACHMENT L**

**COUNTIES WITHIN 100 MILES OF FACILITY**

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**TEXAS**

Grayson, Fannin, Lamar, Red River, Titus, Franklin, Hopkins, Delta, Hunt, Collin, Rockwall, Rains, Wood, Upshur, Bowe, Cass, Marion, Harrison, Panola, Shelby, Gregg, San Augustine, Nacogdoches, Rusk, Smith, Cherokee, Anderson, Freestone, Navarro, Henderson, Van Zandt, Kaufman, Dallas

**OKLAHOMA:**

Bryan, Atoka, Pushmatah, McCurtain, Choctaw

**ARKANSAS:**

Polk, Howard, Pike, Sevier, Little River, Hempstead, Nevada, Miller, LaFayette, Columbia

**LOUISIANA:**

Bossier, Claiborne, Webster, Caddo, Benville, Red River, DeSoto, Sabine

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